Twenty-Second

Annual Catalogue

Session 1897-98

Agricultural and... Mechanical College of Texas

Railroad Depot and Money Order Office:
College Station, Texas.

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ROSS HALL. AUSTIN HALL. MAIN BUILDING.

Special attention is called to the specimen entrance examinations, pages 24, 25, 26. Young men intending to apply for admission are urged to satisfy themselves, before coming to the College, that they can answer such questions.

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Annual Catalogue

Session 1897-98

THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

Agricultural and... Mechanical College of Texas

Railroad Depot and Money Order Office:
College Station, Texas.

AUSTIN:
BEN C. JONES & CO., STATE PRINTERS
1898

Lawrence Sullivan Ross

President
of the
Agricultural and Mechanical College
of Texas

from 1891 to 1898.

63656

Resolutions Adopted by the Faculty,

January 11th, 1898.

Sensible of our great loss, and that of the institution, in the death of President Lawrence Sullivan Ross, and believing that, great as he was in the field of war, and in the halls of state, he was no less great as a college administrator, and probably even more useful in that capacity, we adopt the following resolutions:

Resolved, That while the State may justly mourn the soldier and the statesman, we alone fully know how much the moral worth of his character will be missed in every part of this school; how well qualified he was, in every way, to impress upon the youths entrusted to his care the beauty of a life consecrated to noble aims and high ideals;

That, while thanking God that he was spared to do so great a work here, we lament that he should have been taken from this work at a time when his efforts were meeting with such success;

That we wish to record our profound conviction that to the quiet influence of his presence and example have been largely due the successful united efforts of the faculty, the orderly and studious conduct of the student body, and the good reputation of the institution;

That to his untiring efforts and well-directed energy the college is largely indebted for the many material improvements that have taken place during his administration, making these seven years an unexampled period of continuous growth and prosperity;

That we have a high sense of regret, which will grow upon us day by day, for the loss of his genial presence and his wise and kindly counsel; and that in token of our sorrow for his loss and respect for his memory, in addition to the resolution already passed to wear the badge of mourning for thirty days, be it further

Resolved, That a page in our minutes be devoted to his memory, and that these resolutions be inscribed upon the minutes, and a copy of them be sent to the bereaved family, with the assurance of our heartfelt sympathies.

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CALENDAR
1898.

JANUARY.

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CALENDAR
1899.

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COLLEGE CALENDAR.

1898.

Fall Term Begins Wednesday, September 14.
Anniversary Austin Society, November 15.
National Holiday, Thanksgiving Day.
Christmas Holiday, December 22 to January 2, 1899.

1899.

Winter Term Begins Tuesday, January 3, 1899.
National Holiday, February 22.
Texas Independence Day, March 2.
Spring Term Begins March 15.
Anniversary Calliopean Society, March 16.
San Jacinto Day, April 21.
Final Examinations Begin June 5.
Commencement Sunday, June 11.
Exhibition of Departments and Work of Students, June 12.
Commencement Day, June 13.

BOARD OF DIRECTORS.

HON. F. A. REICHARDT, President	Houston.
HON. JEFFERSON JOHNSON, Commissioner of Agriculture, Insurance, Statistics and History, *ex officio*	Austin.
HON. GEORGE C. PENDLETON	Belton.
HON. W. R. CAVITT, Secretary	Bryan.
HON. F. P. HOLLAND	Dallas.
HON. CHARLES ROGAN	Brownwood.

FACULTY.

Ex-Governor L. S. ROSS,[*] President.

R. H. WHITLOCK,[†] M. E.,
Professor of Mechanical Engineering.

H. H. HARRINGTON, M. S.,
Professor of Chemistry and Mineralogy.
(Chemist to Experiment Station.)

CHARLES PURYEAR, M. A., C. E.,
Professor of Mathematics.

MARK FRANCIS, D. V. M.,
Professor of Veterinary Science.
(Veterinarian to Experiment Station.)

F. E. GIESECKE, M. E.,
Professor of Drawing.

J. C. NAGLE, M. A., C. E., M. C. E.,
Professor of Civil Engineering and Physics.

R. H. PRICE, B. S.,
Professor of Horticulture, Botany, and Entomology.
(Horticulturist to Experiment Station.)

T. C. BITTLE, A. M., Ph. D.,
Professor of Languages.

J. H. CONNELL, M. Sc.,
Professor of Agriculture.
(Director of Experiment Station.)

C. W. HUTSON,
Professor of English and History.

First Lieut. GEO. T. BARTLETT,[‡] 3rd Artillery, U. S. Army,
Professor of Military Science, and Commandant of Cadets.

---

[*] Died January 3, 1898.

[†] President *pro tem.*

[‡] Ordered to join his regiment April 9, 1898. C. C. Todd appointed to fill out unexpired term.

OTHER INSTRUCTORS.

ROBERT F. SMITH,
Associate Professor of Mathematics.

W. B. PHILPOTT, M. S.,
Associate Professor of English and History.

P. S. TILSON, M. S.,
Associate Professor of Chemistry.
(Associate Chemist to Station.)

A. L. BANKS, A. B., M. S.,
Adjunct Professor of Mathematics.

H. NESS, B. S.,
Assistant Professor of Horticulture and Botany.

D. W. SPENCE, B. Sc., C. E.,
Assistant Professor of Civil Engineering and Physics, and Drawing.

A. M. SOULE, B. S. A.,
Assistant Professor of Agriculture.

H. W. SOUTH,
Assistant Professor of English and History, and Languages.

C. E. BURGOON, B. M. E.,
Assistant Professor of Mechanical Engineering.

E. W. KERR, B. S.,
Assistant Professor of Mechanical Engineering.

J. A. BAKER,
Assistant Professor of Commercial Arts.*

PROFESSOR PURYEAR,
Secretary of the Faculty, and Librarian.

PROFESSOR BITTLE,
Chaplain.

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* Discontinued.

OTHER OFFICERS.

A. C. GILLESPIE, M. D.,
Surgeon.

J. A. BAKER,
Secretary.

J. G. HARRISON, A. B.,
Bookkeeper.

B. SBISA,
Steward.

C. A. LEWIS,
Foreman of the Carpenter Shop.

H. C. KYLE, B. S.,
Foreman of the Farm.

G. EBERSPACHER,
Florist.

Assembly Hall.

CATALOGUE OF STUDENTS.

EXPLANATION.

M. S., Master of Science. Agr., Agriculture. Hort., Horticulture. Mech. Eng., Mechanical Engineering. Civ. Eng., Civil Engineering. Com., Commercial.

POST GRADUATES.

Name.	Degree.	Residence.
C. E. Burgoon, B. M. E	M. E	College Station.
A. M. Hildebrandt, B. S	M. S	College Station.
E. W. Kerr, B. S	M E	College Station.

FIRST CLASS.

Name.	Course.	Residence.
Abbott, H. T	Hort	Hillsboro.
Barclay, R. L	Mech. Eng	Temple.
Barnes, R. M	Mech. Eng.	Comanche.
Bretschneider, W	Civ. Eng	Cat Spring.
Brogdon, Stansel	Mech. Eng.	Bryan.
Carter, W. T., Jr	Agr	Brighton.
Crow, E	Hort.	Cisco.
Donalson, C. B., Jr.	Mech. Eng	Kyle.
Foutrel, G. F	Mech. Eng	San Antonio.
Glover, W. F. H	Agr	Yemassee, S. C.
Greenwood, F. J.	Civ. Eng	Stoneham.
Harrison, Wm. Alex	Hort	College Station.
Homann, A. C	Mech. Eng	New Braunfels.
Kerr, J. G	Agr	Vineland.
Knowles, W. C	Mech. Eng	Palestine.
Martin, W. C	Hort	Kyle.
Newton, Gus	Agr	Milano.
Rawlins, H. E	Mech. Eng	Oak Cliff.
Robson, C. G	Hort.	La Grange.
Rountree, T. D	Civ. Eng	Paris.
Scherer, W. A	Hort.	Graydon.
Smith, T. L., Jr	Civ. Eng	Columbia.
Sneed, G. L	Agr	Lucas.
Tracy, H. H	Civ. Eng	Dallas.

SECOND CLASS.

Name.	Course.	Residence.
Adams, J. M	Mech. Eng	Buda.
Anglin, C. C	Mech. Eng	Groesbeeck.
Astin, E. H	Mech. Eng.	Mumford.
Ball, L. L	Civ. Eng	San Angelo.
Barnes, S. E	Agr	Brighton.
Bettis, R. M	Agr	Merle.
Bland, A. C	Civ. Eng	College Station.
Bland, L. F	Agr	College Station.
Bowen, C. K., Jr	Civ. Eng	N. Galveston.
Brewer, H. A	Mech. Eng	Lytton Springs.
Campbell, R. W	Mech. Eng	Arlington.
Carson, R. C	Mech. Eng	College Station.
Charlesworth, C. T	Mech. Eng	La Porte.
Cousins, R. W	Mech. Eng	Austin.
Dance, J. G	Mech. Eng	Columbia.
Ehrhardt, J	Civ. Eng	Westfield.
Evans, C. D	Civ. Eng	Austin.
Horn, T. L	Mech. Eng	Rhea Mills.
Hubbard, T. A. G	Civ. Eng	Paris.
Johnson, C. L	Civ. Eng	Kosse.
Kuhl, E	Civ. Eng	Texarkana.
Kyle, E. J	Hort.	Kyle.
Lewis, M	Mech. Eng	McKinney.
Love, A. C	Civ. Eng	Franklin.
Martin, E. L	Civ. Eng	Kyle.
Monroe, J. S	Civ. Eng	Rio Grande City.
Moon, E. C	Civ. Eng	Gainesville.
Poulter, R. J	Hort.	Howard.
Riley, G. M	Civ. Eng	Houston.
Rose, C. C	Mech. Eng	San Antonio.
Sloss, A. M	Agr	Taylor.
Soles, C. B	Mech. Eng	Bryan.
Traylor, L	Hort.	Dallas.
Whisenant, W. H	Hort.	Kyle.
Whittle, C. T	Mech. Eng	Sulphur Springs.
Winston, J. E	Civ. Eng	Richmond.

THIRD CLASS.

Abrahams, J. E	Mech. Eng	New Braunfels.
Adams, A. J	Agr	Stafford.
Allison, J. S	Mech. Eng.	Sonora.
Austin, H. B	Mech. Eng	Belton.
Barron, L. W	Com	Battle.

Name.	Course.	Residence.
Barta, Louis	Com	College Station.
Baumgarten, C.	Agr	Schulenburg.
Beall, T. D.	Mech. Eng	El Paso.
Biering, S. R.	Civ. Eng	Hitchcock.
Bittle, Tom	Civ. Eng	College Station.
Blackburn, D. C	Agr	Mineral Wells.
Blackwell, W. A., Jr	Agr	Cuero.
Boettcher, R. B	Mech. Eng	Weimar.
Bogusch, E. G	Mech. Eng	Llano.
Brewster, J. J	Civ. Eng	Kyle.
Bryan, W. I	Mech. Eng	Chambersville.
Buchanan, A. P	Mech. Eng	Harvey.
Buhler, G. A	Civ. Eng	Victoria.
Buhler, W. A	Mech. Eng	Victoria.
Cain, J. A	Civ. Eng	Texarkana.
Chambers, E. M	Civ. Eng	Chambersville.
Clement, T. H., Jr	Civ. Eng	Port Lavaca.
Clifford, L.	Mech. Eng	Schulenburg.
Couch, J. E.	Mech. Eng	Foreston.
Coulter, R. E.	Mech. Eng	Texarkana.
Crittenden, E. C	Mech. Eng	Paris.
Crittenden, N. C	Mech. Eng	Paris.
Cummings, R. D	Mech. Eng	Clay.
Dalton, J. G	Civ. Eng	Cleburne.
Davis, L.	Mech. Eng	El Paso.
Donalson, S. J	Agr	Kyle.
Dowell, G. S	Com	Austin.
Emmerson, E. H	Agr	Chandler, Okla.
Farr, R. S	Mech. Eng	Belton.
Faust, H.	Mech. Eng	New Braunfels.
Ferguson, J. N	Com	Rockdale.
Fitzgerald, L	Mech. Eng	Houston.
Fowler, J. C	Mech. Eng	Waco.
Garbade, C. J	Mech. Eng	Witting.
Green, E. H	Com	Yoakum.
Griffiths, T. W., Jr	Mech. Eng	Dallas.
Grogard, P. G	Com	Atlanta.
Grote, A. R.	Mech. Eng	Blowout.
Haberzettle, F. S	Mech. Eng	Fort Worth.
Hall, R. E.	Mech. Eng	Sherman.
Hay, I. B	Mech. Eng	Kyle.
Hillje, Emil	Mech. Eng	Weimar.
Hunter, E. P	Civ. Eng	Huntsville.
Hutson, Cary	Mech. Eng	College Station.
Hutton, C. R	Civ. Eng	Pilot Point.
Jackman, M	Agr	Kyle.

Name.	Course.	Residence.
Jamison, J. C	Com	Whitesboro.
Japhet, H	Mech. Eng	Houston.
Jones, E. T	Com	Donahoe.
Jones, G. L	Civ. Eng	Donahoe.
Jones, W. J	Com	Burnet.
Kahn, M. S	Agr	Hallettsville.
Kennedy, J. M	Mech. Eng	Beeville.
Knolle, B. B	Agr	Industry.
Lamkin, R. G	Mech. Eng	Huntsville.
Law, J. O	Mech. Eng	Mansfield, La.
Leggett, F. K	Agr	Leggett.
Leggett, J. W	Agr	Moscow.
Leggett, W. W	Agr	Leggett.
Lewis, J	Agr	McKinney.
Luhrsen, C. W	Com	Stratton.
McCormick, S	Mech. Eng	Columbus.
McGee, L. E	Com	Chicago, Ill.
McGuire, J	Mech. Eng	Rockdale.
McNeill, L. J	Mech. Eng	Brazoria.
Meroney, W. P	Civ. Eng	Comanche.
Mosley, Hal	Mech. Eng	Dallas.
Moursund, A. W., Jr	Mech. Eng	Fredericksburg.
Myers, O. W	Mech. Eng	Josephine.
Neely, R. L	Civ. Eng	Sherman.
Page, J. G	Com	Cauthon.
Pfannkuche, H	Mech. Eng	San Antonio.
Prell, T. W	Mech	Brazoria.
Pryor, D. M	Agr	San Antonio.
Reissner, A	Mech. Eng	Weimar.
Richter, Otto	Mech. Eng	Shiner.
Roark, J. W	Agr	Corpus Christi.
Roeder, B. G	Mech. Eng	Lockhart.
Rogers, C. E	Mech. Eng	Waco.
Royall, A. H	Mech. Eng	College Station.
Russek, Gus	Com	Schulenburg.
Saunders, W. K., Jr	Civ. Eng	Belton.
Scherer, B. G	Mech. Eng	Graydon.
Senftenberg, Chas	Civ. Eng	Columbus.
Short, A	Agr	Decatur.
Simpson, O. M	Civ. Eng	Jacksboro.
Simpson, S. H	Civ. Eng	Hallettsville.
Spivey, R. M	Mech. Eng	Paris.
Stenger, L. E	Mech. Eng	Dallas.
Suber, E. H	Com	College Station.
Thomas, E. E	Mech. Eng	Shephard.
Thomas, L. L	Mech. Eng	Bonham.

Name.	Course.	Residence.
Thrower, J. D	Agr	Mayhew, Miss.
Tilley, H. P	Mech. Eng	Jacksonville.
Toberman, C. E	Mech. Eng	Seymour.
Tolson, R. O	Com	Haskell.
Van der Stucken, W	Mech. Eng	Fredericksburg.
Walden, Wm	Agr	Dickinson.
Waller, B	Mech. Eng	Fentress.
Walling, E. T	Com	Whitney.
Watson, J. O. B	Civ. Eng	Hillsboro.
Wheat, G. D	Mech. Eng	Rock Springs.
Wiley, B. H	Com	Harvey.
Wilkins, L. T	Agr	Brenham.
Williams, A. C	Mech. Eng	Harvey.
Wink, E. H	Mech. Eng	Industry.
Winkler, A	Agr	The Grove.
Wood, R. F	Civ. Eng	Hillsboro.

FOURTH CLASS.

Name.	Residence.
Alexander, E	Cedar Creek.
Allison, J. W	Sonora.
Anderson, E. C	Whitesboro.
Atlee, T. G	Laredo.
Baker, C. F	Waco.
Bass, W. E	Whitesboro.
Baumgarten, W	Schulenburg.
Becker, E. F	Brenham.
Blackmon, T. C	Fairfield.
Blake, S. R., Jr	Bellville.
Brewster, C. W	Kyle.
Brown, E	Greenwood.
Bundy, O. T	Milford.
Carey, H. E., Jr	Weimar.
Carpenter, W. F	Toyah.
Cavitt, Howard	Bryan.
Clark, Chas	Eolian.
Clegg, O	Trinity.
Clement, J. E	Port Lavaca.
Cliett, O. W	Martindale.
Cole, F. T	Harvey.
Coleman, J. H., Jr	Rock Springs.
Collins, W. B	Mason.
Colwick, O. J	Norse.
Cox, S. H	Rock Springs.
Daugherty, H. M	Fentress.
Davenport, W	Gainesville.

Name.	Residence.
De Ware, Robt	Jefferson.
Downard, Sam	Gainesville.
Dunn, E. A	Dulin.
Durham, E. C	Longview.
Dyas, Frank	Yoakum.
Eberspacher, Robt	College Station.
Eichblatt, O	Skidmore.
Elrod, H. E	Columbus.
Fehrenkamp, E.	Frelsburg.
Fewel, E. D.	El Paso.
Field, Eldon	Dallas.
Fitch, S.	Alice.
Flinn, C. N	Dallas,
Frobese, H	Cuero.
Gandy, J. A	Welborn.
Garbade, W. T	Witting.
Gardner, C	Bellville.
Garrett, T. H., Jr	Stranger.
Garrett, Webb	Stranger.
Garth, T. G	Bryan.
Gehren, F. W.	Austin.
Graves, D	Karnes City.
Greeves, W. B	Beaumont.
Gurney, F. W., Jr	Smithville.
Halzman, F.	Industry.
Harrison, W. P	Bedias.
Harrison, Wm. Arthur	Columbus.
Heffner, H. M.	Houston.
Heflin, R. L., Jr.	Galveston.
Heierman, D. H.	Austin.
Heierman, E. K	Austin.
Hollingsworth, H. V	Ellsworth.
Hollingsworth, S. R.	Ellsworth.
Holmes, J. R., Jr	Galveston.
Holt, M. A	Washington, Ark.
Holt, O. C.	Lockhart.
Hoskins, H	Dallas.
Huffhines, E.	Dallas.
Hughes, A.	Austin.
Hurst, Guy	Royse.
Hutcherson, J. L.	Sulphur Springs.
Hyde, W	Taylor.
Jackson, H. M	Willow Hole.
Jamison, B	Angleton.
Jamison, T. J	Angleton.
Jewell, T. W	Graham.

Name.	Residence.
Jolly, A. A	Welborn.
Jones, F. S	Victoria.
Jones, G. P	Breckenridge.
Keiner, E. J.	Moravia.
Kelly, J. W.	Brownsville.
Kendall, E. L	Chambersville.
Korff, A.	Shelby.
Kyser, E	Marlin.
Leckie, A. R.	Runge.
Lewis, A. S	Yoakum.
Louwien, A.	Bellville.
Lynn, Luther	Calvert.
Mathews, J	Cedar Bayou.
McKain, A. S	Wills Point.
McNeill, A. J.	Stoneburg.
McMullen, O.	Rockport.
Mitchell, D. E.	Kyle.
Mike, J	Bryan.
Morris, Ira	Gainesville.
Mueller, H. A.	Schulenburg.
Myers, W. H.	Housely.
Neathery, W	Farmersville.
Nance, E. P.	Kyle.
Olds, Ray	Orange.
Oliphant, L.	Austin.
O'Rourke, H. E	Smithville.
Orr, J. A.	Milford.
Page, J. F	Cauthon.
Parker, J. P	Trinity.
Pendleton, J. E	Farmersville.
Potthast, C	Weimar.
Powell, C	Bartlett.
Powell, H.	Bartlett.
Preston, R. A.	Stiles.
Railey, C. C.	Pankey.
Raysor, L.	Chappel Hill.
Reardon, Robt	Dallas.
Reese. Vinson	Velasco.
Roark, A. C.	Dodge.
Ross, Nev.	College Station.
Rudd, Ed	Arlington.
Saunders, J	Conroe.
Shaw, L. D.	Columbus.
Shea, John	Belton.
Sherman, W. H.	Munday.
Shiner, M.	San Antonio.

Name.	Residence.
Sholars, L.	Orange.
Short, W. S.	Dodd City.
Shultz, C. E.	Trinity.
Simon. R	College Station.
Smith. I. T	Blossom.
Spears, Sam.	College Station.
Spiller, J.	Jacksboro.
Springs, W. F.	College Station.
Springstun, C. E	San Angelo.
Stafford, W. M	Victoria.
Stasny, H.	College Station.
Strain, C. E.	Lancaster.
Swann, J. W.	Marlin.
Tabor, A. J., Jr.	Bryan.
Tanner, J. O.	Columbus.
Thomas, M. F.	Clay.
Thurman, Zan.	Jefferson.
Vernor, G. B.	San Antonio.
Wallace, W. V.	Johnson Station.
Weatherly, C. L.	Grape Vine.
Weston, D. C.	Hempstead.
White, A. H.	Houston.
White, E. W.	Abilene.
Whitfield, L. W.	Bartlett.
Whittle, J. L., Jr.	Sulphur Springs.
Williams, J. B.	Paris.
Wittman, John, Jr.	Bryan.
Wren, M. M.	San Marcos.
Zak, J. F.	Welborn.

SPECIAL STUDENT.

Mead, John	College Station.

ELECTIVE STUDENTS.

Blalock, W. B.	Huntsville.
Boethel, N. C.	Hackberry.
Brigham, J. H.	Abilene.
Burges, W. H., Jr.	Seguin.
Burke, R. E.	Bonham.
Durham, T. O.	Cleburne.
Dwyer, W. F.	San Marcos.
Harrison, C. C.	Bedias.
Hine C.	Davilla.
Melgaard, B.	Brazoria.
Sellars, B. B.	Decatur.
Sterns, J. B.	Houston.

PRESIDENT'S RESIDENCE.

SUMMARY.

Post Graduates	3
First Class	24
Second Class	36
Third Class	113
Fourth Class	148
Special Student	1
Students in Elective Courses	12
Total	337

OBJECTS AND POLICY.

The act of Congress which established the State Agricultural and Mechanical Colleges defines their objects, but under the act there have been founded as many different schools as there are States. These institutions have presented a variety of educational schemes, which have embraced nearly all gradations, from the classical and mathematical college to the manual labor industrial school. In view of this fact, it is proper to state as definitely as possible the interpretation given to the act of Congress by the authorities of this College, and the manner in which they are endeavoring to carry out its provisions.

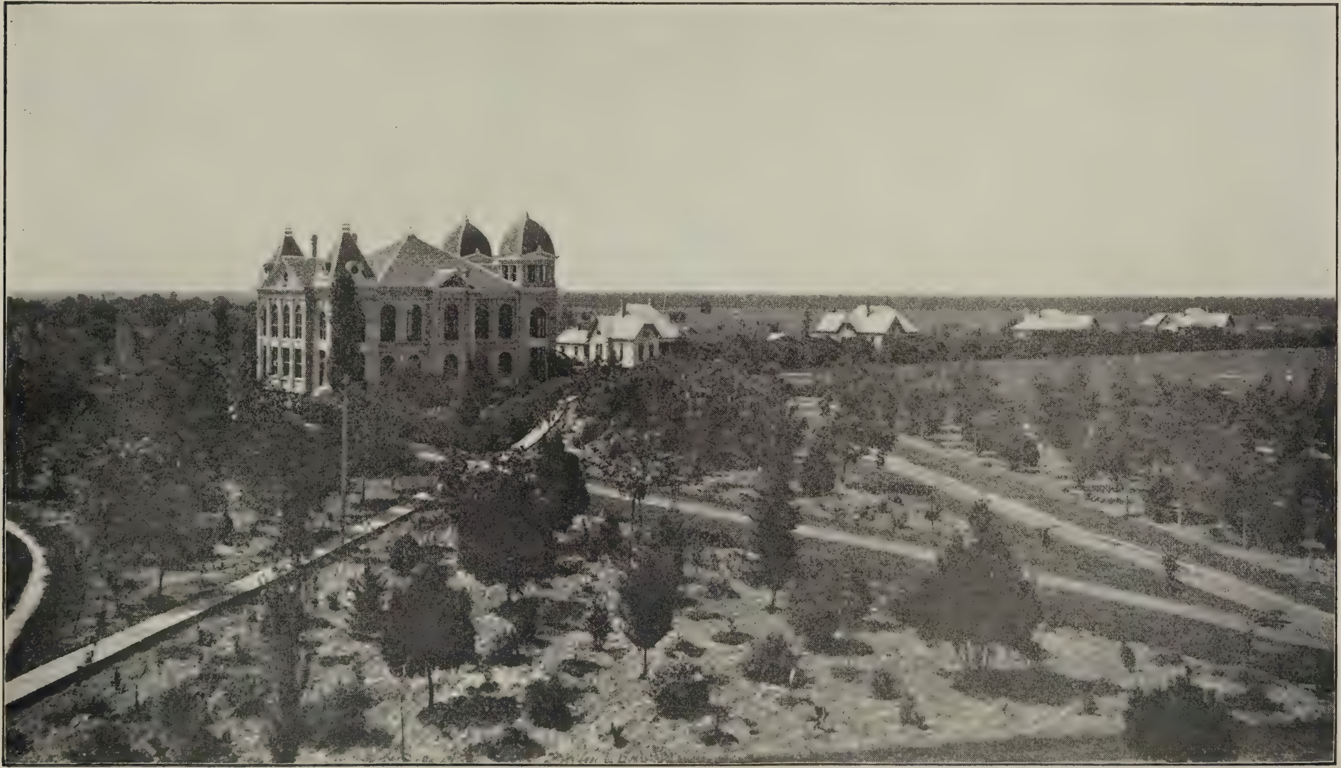
This College proposes to equip young men for their future career by the development of their powers with reference to the wants of life, and to impress upon them the dignity, the nobility, and the duty of labor.

There is in our State a great field and a growing demand for the services of those fitted for work in every branch of applied science, and we are now compelled to draw upon other States to fill the most lucrative, honorable, and important positions in every industrial enterprise.

It is proposed to meet these conditions by offering our young men the opportunity to obtain that education and training which will fit them to take a leading part in the material development of the State; to become scientific farmers and horticulturists, familiar with the properties and needs of soils, the laws of plant growth, the principles of breeding, and, in general, with rational methods based on the revelations of modern science; to become mechanical engineers, draughtsmen, chemists, civil engineers, competent to fill responsible positions in these callings—men fitted not only to meet demands made upon them, but to create such demand by pointing the way to progress and development.

Care is taken, also, that the student, while engaged in such special studies, shall give a due part of his time to those more general forms of knowledge which are essential to a liberal education and mark the well-informed citizen in any walk of life.

The military feature is an important adjunct to the other work of the College. It is conducive to health and to bodily grace and strength, and cultivates habits of strict attention and of obedience, punctuality, neatness, regularity.



Assembly Hall and Cottages.

METHOD AND SCOPE OF INSTRUCTION.

The courses of instruction are designed in accordance with the above outline of objects and policy. In all of them the fundamental idea is education in practical science, particularly in agriculture, in horticulture, in mechanical engineering, and in civil engineering. With this idea in view, instruction is given in English and history, physical geography, mathematics, foreign languages, physics, chemistry, and in other studies which lie at the foundation of a sound education and furnish the best preparation for the more technical studies of the several courses. Instruction is given by the use of text-books, by lectures, and recitations; also, by practice in shop, field, laboratory, and drawing room. These practical exercises have a high educational value, and serve a useful purpose in fixing and rendering clear the ideas presented in the class room; they have also a practical value, for they are, in great measure, examples of just such problems as the scientific agriculturist, or engineer, will encounter in the pursuit of his calling. For convenience of instruction, the classes are sub-divided into sections of suitable size. There are written examinations at such intervals as may be deemed best.

INFORMATION CONCERNING ADMISSION.

REQUIREMENTS FOR ADMISSION.

To enter the College, an applicant must be at least fifteen years old. He must be free from contagious or infectious disease, or any deformity that would unfit him for the performance of his duties as a student of the College. He may be required to furnish evidence that he has not been dismissed from another institution of learning, and that his moral character is good.

The mental attainments necessary for entering the Fourth Class comprise a fair knowledge of geography, of elementary English grammar and composition, and of arithmetic as far as percentage, embracing the subjects of factoring, greatest common divisor, least common multiple, common and decimal fractions, and denominate numbers.

Graduates of high schools approved by the Faculty will be admitted without examination.

Applicants for the Third Class will be required to pass a satisfactory examination on the mathematics, English and physical geography studied by the Fourth Class, and to make up book No. 5 of Thompson's Freehand Drawing.

Applicants for the Second Class will be required to pass a similar examination on the mathematics and English and physical geography of the Fourth Class, and on all the subjects studied by the Third Class in the course desired, but they may be admitted conditionally if they fail in not more than three subjects, equivalent, together, to eight hours per week for one term.

The above requirements apply to candidates for admission at the opening of the session. Those who come later will be examined, also, upon the work already gone over by the class they propose to enter.

SPECIMEN ENTRANCE EXAMINATIONS.

Special attention is called to the following specimen entrance examinations. Young men intending to apply for admission are urged to satisfy themselves by actual trial before coming to College that they can answer such questions.

ENTRANCE EXAMINATIONS FOR FOURTH CLASS.

Arithmetic.

1. Add $12\frac{3}{4}$, $23\frac{5}{6}$, and $40\frac{7}{8}$.
2. Find the difference between $84\frac{1}{3}$ and $42\frac{7}{8}$.
3. Reduce $\frac{4\frac{2}{3}+3\frac{1}{2}}{3\frac{3}{4}\times 2\frac{5}{6}}$ to a simple fraction.
4. If two-thirds of a farm is worth $9000, what is the whole farm worth?
5. Reduce $\frac{3}{8}$, $\frac{4}{5}$, $\frac{5}{16}$, and $\frac{9}{25}$ to decimals.
6. Multiply 361.24 by 3.256, and divide the product by 81.4.
7. What will 7 bu. 3 pk. 4 qt. nuts cost at $1.20 per peck?
8. Reduce 65 rd. 2 yd. 1 ft. 5 in. to inches.
9. Find the greatest common divisor of 108 and 420.
10. Find the least common multiple of 24, 180, and 45.

English and History.

1. Spell correctly: eez, seez, pleez, neez, neese, poleese, acheev, beleef, looz, brooz.

2. Name the capitals of France, Russia, Spain, Virginia, Alabama, California, Texas, Italy, and Brazil.

3. Name the rivers of Texas.

4. Name the nouns in this sentence: "Candidates for admission into the Fourth Class are examined on Spelling, Grammar, Geography, and Reading."

5. Write a half-page account of your trip to this place.

6. Read aloud this sentence: "A great elm tree spread its broad branches over it, at the foot of which bubbled up a spring of the softest and sweetest water in a little well formed of a barrel, and then stole sparkling away through the grass to a neighboring brook that bubbled along among alders and dwarf willows."

ENTRANCE EXAMINATIONS FOR THIRD CLASS.

Arithmetic. (Besides such questions as the above.)

1. Find the interest at 8 per cent on \$425 for 2 years 5 months and 18 days.

2. How long must \$450 remain at interest at 6 per cent in order to gain \$94.50.

3. If by selling land at \$30 per acre I lose 25 per cent, at what price must I sell it in order to gain 40 per cent?

4. How much carpeting 1 yard wide will be required for a room 16 by 18 feet, and what would it cost at \$1.37½ per yard?

5. What is meant by a centimeter?

Algebra.

1. Divide $5x^4-14x^3y+31x^2y^2-22xy^3+12y^4$ by $5x^2-4xy+3y^2$.

2. Find the factors, the greatest common divisor, the least common multiple, of a^2-b^2 and $a^3+2a^2b+ab^2$.

3. From $\frac{a+b}{a-b}$ subtract $\frac{a-b}{2(a+b)}$.

4. Multiply $\frac{a-b}{a^2+2ab}$ by $\frac{a^2-4b}{a^2-ab}$.

5. Given $\frac{3x-1}{4} - \frac{4x-5}{5} = 4 + \frac{7x+5}{10}$, find the value of x.

English and History.

1. Name the two Austins who were founders of Texas.

2. What hard fighters fell at the Alamo?

3. What battle won the independence of Texas? When? Generals on each side?

4. What were the causes of the Revolutionary War? Name its chief battles.

5. What British general fell at the battle of New Orleans? Who led the Americans?

6. What battles of the Mexican war were fought on the soil of Texas?

7. In what battle did Stonewall Jackson fall?

8. Who commanded the Alabama?

9. Spell correctly: etherial, inseperuble, nessiserrily, stupify, resiprossity, tippical, ekzillerate, embarrasment.

10. Write a sentence containing an objective complement.

11. Write a sentence containing an attributive complement.

12. "Soft is the strain when zephyr gently blows." State the logical predicate.

13. Write the emphatic form of *laugh,* indicative, present, and past.

14. "Rising from these elevated table-lands, the traveler will see lofty ranges of granite mountains." Correct this.

15. "He likes me better than you." Clear of ambiguity.

16. "The Judge of all the earth will do right." Change to interrogative.

17. Write a sentence containing an adjective clause.

18. "I was grieved when I heard how he had obtained the character which he bore." Analyze, stating relation of subordinate clauses.

19. "That the cause is lost can not be denied." State the subject.

20. Write a brief composition on the "Resources of Texas."

Physical Geography.

1. What is the Nebular Theory?

2. Mention the evidences of internal heat of the earth.

3. What are the causes of earthquakes? Of volcanoes? Name the volcanic belts.

4. What are the physical properties of water?

5. Give the theory of tides.

6. Explain the laws of storms.

7. How do rivers change the surface of the earth?

8. Name the classes of islands, and explain the formation of each class.

9. Name the leading characteristics of the great divisions of mankind.

10. Draw a physical map of North America, indicating thereon the principal rivers, lakes, and mountains.

MATRICULATION.

Upon arrival at the College, young men intending to enter will report as soon as possible to the President of the College. From him they will go to the several professors for examination and enrollment in classes, and to the Commandant for assignment to company and quarters.

Upon matriculation, every student shall sign the following pledge: "I promise to obey the constituted authorities of this College, and to support good order and discipline. I certify that I have in my possession no firearms or other deadly weapons."

Firearms or other deadly weapons brought to the College by students shall be deposited with the President.

EXPENSES FOR SESSION OF NINE MONTHS.

Trust fund	$5 00
Incidental fee	5 00
Physician's fee	5 00
Maintenance, Fall Term	50 00
Maintenance, Winter Term	35 00
Maintenance, Spring Term	40 00
Total	$140 00

Expenses of a graduate student will be $15 for material used in laboratories and practical work, and $5 for physician's fees, with charge for maintenance as above. Day students pay $15 as trust fund, incidental fee, and physician's fee, as above.

The trust fund is to pay for property damaged or destroyed, and will be refunded if there is no charge of this kind against the student.

Incidental and physician's fees are payable on entrance, whether at the beginning of or during the session, and can not be refunded.

Maintenance includes board, fuel, washing, lights, room rent, bedsteads, mattresses, pillows, tables, washstands, chairs, buckets, basins and slop cans, all of which the College furnishes.

Each student is required to bring with him and keep on hand a sufficient supply of bed clothing, towels, etc., and underclothing sufficient for one year's wear.

Students are required to take their meals at the Mess Hall.

Payment for each term must be made in advance, but a student entering during a term will be charged maintenance for the remainder of that term only.

A student once entering for the term, and having paid for that term, or the balance of it, as required by the resolution of the Board of Directors, shall forfeit all claim to said payment in case of voluntary withdrawal from the College before the expiration of said term, except in case of sickness.

If on any account the prompt payment of the dues should be delayed, the President will mail to the parent or guardian of the student the following notice:

NOTICE TO PARENTS AND GUARDIANS.

"Your attention is respectfully directed to the following resolution passed by the Board of Directors of the Agricultural and Mechanical College of Texas:

'*Resolved*, That it shall be the duty of the Treasurer to notify parents and guardians, ten days after the date upon which a term payment is due, that if same is not paid within twenty days thereafter (thirty days from time the payment was due), the student so in arrears will be dismissed.

'Payment due . . . . .18. .   Notice sent. . . . . .18. .
'Limit expires . . . . .18. .'

"All communications in reference to accounts of students should be addressed to the President of the College."

UNIFORMS, BOOKS, AND STATIONERY.

A neat uniform of cadet gray is furnished here, at a cost of from $15.50 to $18; a working suit of drilling, at a cost of about $1.50.

For drill during hot weather, a blue flannel shirt, with belt, is worn instead of the coat.

These uniforms are made by contract, and students are required to purchase from the contract tailor in order that uniformity may be secured in the cut and quality of the clothing, and that parents may be protected from imposition by irresponsible persons. The contract suits are carefully inspected by the Commandant of Cadets, and thus the full value of money expended for them is secured.

The College keeps a supply of books, and sells them to students at cost. They must be paid for at time of purchase. Students are given the privilege of returning them on leaving the College, and receiving therefor the amount paid, less a reasonable charge for use and damage.

STUDENT LABOR.

The Legislature has provided a fund by which a limited number of industrious young men may defray a part of their expenses by working for the College at such times as their regular duties will permit.

The rate of pay is made to depend upon the character of the work, and the manner in which it is performed, and, with certain exceptions, the maximum rate is 12½ cents per hour.

BEGINNING OF THE SESSION.

The twenty-third annual session will open Wednesday, September 14, 1898, and will close Tuesday, June 13, 1899.

Students should not arrive at the College earlier than Monday, September 12. Parents are requested to communicate with the President before sending their sons.

REGULAR COURSES OF INSTRUCTION.

There are four regular courses of study leading to the degree of Bachelor of Science; the particular course pursued being specified in the diploma. For the first year they are identical, thus giving the student the elementary training requisite for a comprehension of the more technical subjects that follow, at the same time affording him opportunity for a more intelligent choice of the course he is to pursue in the higher classes. At the beginning of the "third class," or second year, choice is offered between the Agricultural and Mechanical courses, while at the beginning of the second term of the same year Mechanical students must choose between the course in Mechanical Engineering and that of Civil Engineering. At the beginning of the "second class," or third year, Agricultural students choose between the course in Agriculture and the course in Horticulture.

The languages are optional, except as shown in the curricula, and may be studied as subjects outside the regular courses. There is no charge for any optional study.

A condensed statement of the studies and other duties required of the students taking each of these courses can be found on pages 31 to 38. For a full explanation of the work done by departments of instruction, their equipment, and methods of instruction, the reader is referred to pages 49 to 66.

THE AGRICULTURAL COURSE.

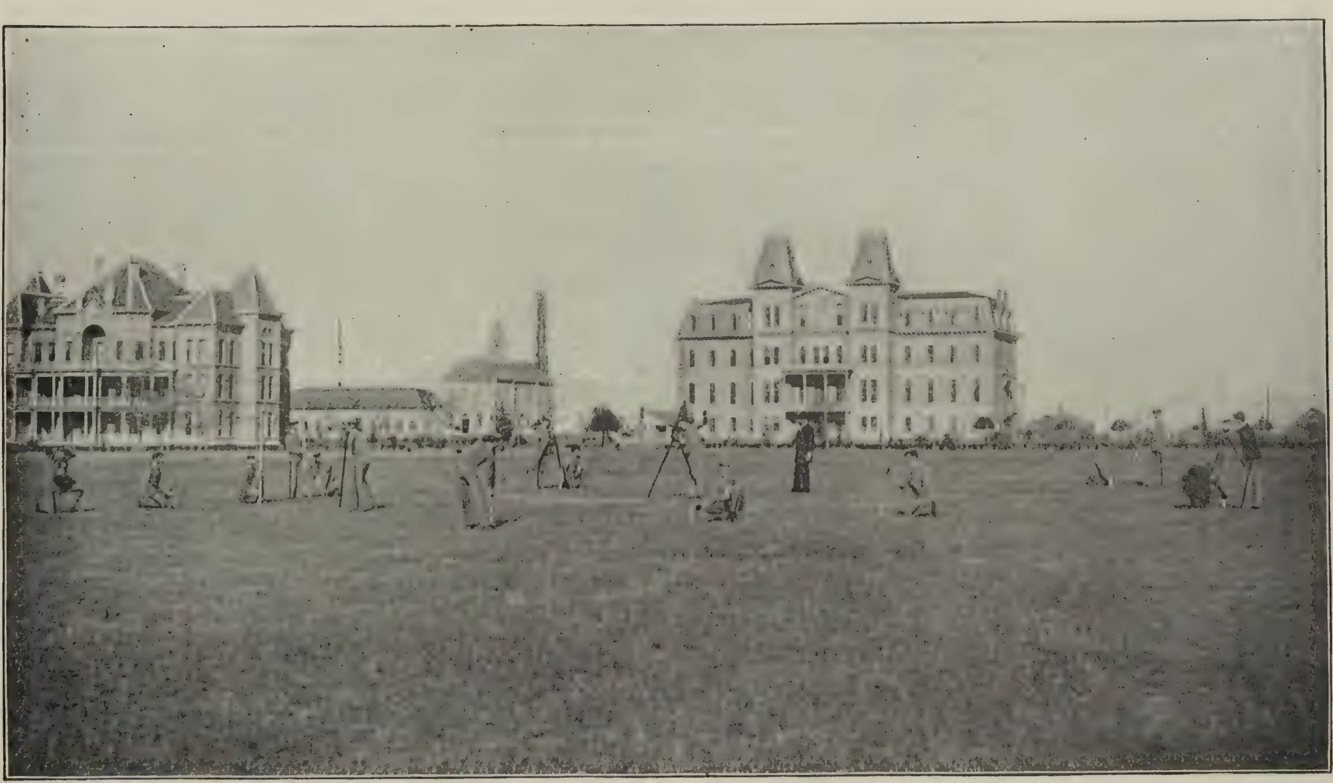
This course provides a thorough scientific knowledge of Agriculture in the Southwest, and supplies a liberal education in English language, history, mathematics, and the sciences of chemistry, physics, botany, animal anatomy, and principles of hygiene. The foreign languages are optional. Class rooms and fully equipped scientific laboratories are provided for instruction in the sciences relating to agriculture, chemistry, botany, and physics. The scientific principles are taught in their application to the growth of grain and forage crops, production of pork and beef, feeding and care of milk herd, manufacture of butter and cheese, cultivation of cotton, vegetable gardening, and in the irrigation of field and garden crops. The course offers a general education, and prepares young men for taking charge of farms, engaging in any branch of stockraising or dairying now practiced in the State, or for entrance on an advanced course of study leading to professions in scientific agriculture.

HORTICULTURAL COURSE.

The object of the Horticultural course is to prepare the student to engage in the highest development of the horticultural industry. He is taught how to propagate the various plants; to plan, set, cultivate and manage orchards, vineyards and gardens to best advantage. How to bring contentment and happiness to the homes of rural lives by the cultivation of trees, shrubbery, flowers, and grass, is considered. The knowledge of botany enables the student to understand the laws of plant growth. The knowledge of entomology enables the student to prevent injury done to plants by injurious insects. In order to give the student a well rounded education, other allied sciences, such as mathematics, chemistry, veterinary science, English, physics, and German or Latin, are taught.

MECHANICAL COURSE.

The object of the course in Mechanical Engineering is to educate the student not simply to become a mechanic, but also to enable him to take charge of men and tools, erect machinery, lay out plans, etc., with the minimum amount of further preparation. This necessitates a study not only of engineering problems, but also demands a broad foundation of



Practice in Civil Engineering.

useful knowledge, and a training which leads as much as possible to originality in thought and quick perception of the objects sought. With this in view, the subjects studied in this course are carefully selected, and may be found in detail on page 63.

CIVIL ENGINEERING COURSE.

This course is intended to prepare young men for entrance upon professional practice and advanced study in some one of the many branches included in the scope of Civil Engineering; to enable the graduate to survey and map areas; to locate, construct and maintain highways, railroads, streets, pavements, water-works systems, sewerage systems, canals, dams, irrigation ditches, bridges, and other structures; to become draughtsmen; and, in fact, to enter upon the advanced study necessary for almost any one of the special lines embraced in the work of the Civil Engineer.

CURRICULA.

The subjects embraced in these courses are shown in detail on the following pages; the numerals indicate the number of hours per week; practice and work are indicated by *italics*. The numerals in parenthesis indicate the totals in recitations, and in practice and work.

AGRICULTURAL COURSE.

Fourth Class.

FALL TERM.

Arithmetic	5
English	5
History of Texas	5
Physical Geography	(19)-4
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing and Penmanship	3
Infantry Drill	(12)-3

HORTICULTURAL COURSE.

Fourth Class.

FALL TERM.

Arithmetic	5
English	5
History of Texas	5
Physical Geography	(19)-4
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing and Penmanship	3
Infantry Drill	(12)-3

WINTER TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	(7½)-1½

SPRING TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	1½
Infantry Drill	(10½)-3

MECHANICAL ENGINEERING COURSE.

FOURTH CLASS.

FALL TERM.

Arithmetic	5
English	5
History of Texas	5
Physical Geography	(19)-4
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing and Penmanship	3
Infantry Drill	(12)-3

WINTER TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	(7½)-1½

WINTER TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	(7½)-1½

SPRING TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	1½
Infantry Drill	(10½)-3

CIVIL ENGINEERING COURSE.

FOURTH CLASS.

FALL TERM.

Arithmetic	5
English	5
History of Texas	5
Physical Geography	(19)-4
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing and Penmanship	3
Infantry Drill	(12)-3

WINTER TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	(7½)-1½

SPRING TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	1½
Infantry Drill	(10½)-3

AGRICULTURAL COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
Elementary Agriculture	2
Botany and Fruit Culture	4
Physics	(20)-4
Agricultural and Horticultural Practice	5
Free-hand Drawing	1½
Infantry Drill	(9½)-3

WINTER TERM.

Geometry	5
English and History	5
Breeds of Stock	4
Physics	3
Physiology	(20)-3
Agricultural and Horticultural Practice	5
Free-hand Drawing	(6½)-1½

SPRING TERM.

Geometry	5
English and History	5
Agricultural Grasses	3
Vegetable Culture	2
Systematic Botany	(19)-4
Agricultural and Horticultural Practice	5

SPRING TERM.

Algebra	5
English	5
History of United States	5
Bookkeeping	(18)-3
Carpentry Practice	4
Physical Geography	2
Free-hand Drawing	1½
Infantry Drill	(10½-3

HORTICULTURAL COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
Elementary Agriculture	2
Botany and Fruit Culture	4
Physics	(20)-4
Agricultural and Horticultural Practice	5
Free-hand Drawing	1½
Infantry Drill	(9½)-3

WINTER TERM.

Geometry	5
English and History	5
Breeds of Stock	4
Physics	3
Physiology	(20)-3
Agricultural and Horticultural Practice	5
Free-hand Drawing	(6½)-1½

SPRING TERM.

Geometry	5
English and History	5
Agricultural Grasses	3
Vegetable Culture	2
Systematic Botany	(19)-4
Agricultural and Horticultural Practice	5

Free-hand Drawing	1½
Mechanical Drawing	1½
Infantry Drill	(11)-3

MECHANICAL ENGINEERING COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
M. E. Lectures	2
Physics	(16)-4
Shop Practice	5
Mechanical Drawing	3
Infantry Drill	(11)-3

WINTER TERM.

Algebra	2
Geometry	5
English and History	5
Steam Engine	3
Physics	(18)-3
Shop Practice	5
Mechanical Drawing	(8)-3

SPRING TERM.

Algebra	2
Geometry	5
English and History	5
Steam Engine	3
Electricity and Magnetism	(18)-3
Shop Practice	5
Mechanical Drawing	3
Infantry Drill	(11)-3

Free-hand Drawing	1½
Mechanical Drawing	1½
Infantry Drill	(11)-3

CIVIL ENGINEERING COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
M. E. Lectures	2
Physics	(16)-4
Shop Practice	5
Mechanical Drawing	3
Infantry Drill	(11)-3

WINTER TERM.

Algebra	2
Geometry	5
English and History	5
Physics	4
German or French	(18)-2
Shop Practice	5
Mechanical Drawing	(8)-3

SPRING TERM.

Algebra	2
Geometry	5
English and History	5
Road Making	2
Electricity and Magnetism	3
German or French	(18)-2
Shop Practice	5
Mechanical Drawing	3
Infantry Drill	(11)-3

AGRICULTURAL COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry..	3
Principles of Breeding Live Stock	5
Entomology	2
Inorganic Chemistry	4
Veterinary Medicine	(16)-2
Agricultural Work	2½
Entomology	2½
Analytical Chemistry	2½
Infantry Drill	(10½)-3

WINTER TERM.

Trigonometry	4
English	4
Dairying	2
Inorganic Chemistry	4
Veterinary Medicine	2
Drill Regulations	(18)-2
Agricultural Work	5
Analytical Chemistry	(10)-5

SPRING TERM.

Algebra	4
History of England	2
Dairying	2
Irrigation and Drainage	3
Organic Chemistry	4
Surveying	(18)-3
Agricultural Work	2½
Analytical Chemistry	5
Surveying	——
Zoology	2
Infantry and Artillery Drill,	(12½)-3

HORTICULTURAL COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry..	3
Histological Botany	4
Entomology	2
Inorganic Chemistry	4
Veterinary Medicine	2
German or Latin	(18)-3
Horticultural Work	5
Analytical Chemistry	2½
Entomology	2
Infantry Drill	(12½)-3

WINTER TERM.

Trigonometry	4
English	4
Inorganic Chemistry	4
Veterinary Medicine	2
German or Latin	3
Drill Regulations	(19)-2
Botany	2½
Analytical Chemistry	(7½)-5

SPRING TERM.

Algebra	4
History of England	2
Small Fruit Culture	3
Organic Chemistry	4
German or Latin	3
Surveying	(19)-3
Horticulture	2½
Analytical Chemistry	5
Surveying	——
Zoology	2
Infantry and Artillery Drill,	(12½)-3

MECHANICAL ENGINEERING COURSE.

SECOND CLASS.

FALL TERM.

Geometry and Trigonometry	5
Slide Valve	4
Inorganic Chemistry	4
Descriptive Geometry	(18)-5
Shop Practice	5
Mechanical Drawing	4
Infantry Drill	(12)-3

WINTER TERM.

Trigonometry	4
English	4
Graphics	4
Inorganic Chemistry	4
Drill Regulations	(18)-2
Shop Practice	5
Mechanical Drawing	(9)-4

SPRING TERM.

Algebra	5
History of England	2
Machine Design	4
Metallurgy	4
Kinematic Drawing	1
Surveying	(19)-3
Shop Practice	5
Mechanical Drawing	4
Surveying	——
Infantry and Artillery Drill,	(12)-3

CIVIL ENGINEERING COURSE.

SECOND CLASS.

FALL TERM.

Geometry and Trigonometry	5
Sewers and Drains	2
Inorganic Chemistry	4
Descriptive Geometry	5
German or French	(19)-3
Shop Practice	5
Mechanical Drawing	4
Infantry Drill	(12)-3

WINTER TERM.

Trigonometry	4
English	4
Surveying	2
Inorganic Chemistry	4
German or French	3
Drill Regulations	(19)-2
Shop Practice	5
Mechanical Drawing	(9)-4

SPRING TERM.

Algebra	5
History of England	2
Plane and Railroad Surveying,	5
Geology	3
German or French	(18)-3
Shop Practice	5
Mechanical Drawing	4
Surveying	——
Infantry and Artillery Drill,	(12)-3

AGRICULTURAL COURSE.

First Class.

FALL TERM.

English Literature	4
Feeding Animals	5
Industrial Chemistry	4
Veterinary Surgery	(16)-3
Agricultural Work	2½
Analytical Chemistry	4
Veterinary Practice	2
Infantry Drill	(11½)-3

WINTER TERM.

Feeding Animals	5
Landscape Gardening	1
Forestry	2
Agricultural Chemistry	5
Veterinary Surgery	3
Military Science Lectures	(17)-1
Agricultural Work	5
Analytical Chemistry	2½
Dissecting	(12½)-5

SPRING TERM.

History of England	2
Farm Management	5
Injurious Insects	2
Forage Plants	2
Geology	4
Veterinary Surgery	(18)-3
Agricultural Work	5
Analytical Chemistry	2½
Veterinary Practice	2½
Infantry and Artillery Drill	(13)-3
Thesis.	

HORTICULTURAL COURSE.

First Class.

FALL TERM.

English Literature	4
Viticulture and Nut Culture	2
Fungi and Plant Diseases	2
Industrial Chemistry	4
Veterinary Surgery	3
German or Latin	(18)-3
Botany	5
Analytical Chemistry	4
Veterinary Practice	2
Infantry Drill	(14)-3

WINTER TERM.

Forestry	2
Landscape Gardening	1
Agricultural Chemistry	5
Veterinary Surgery	3
German or Latin	3
Military Science Lectures	(15)-1
Horticulture	5
Analytical Chemistry	2½
Dissecting	(12½)-5

SPRING TERM.

History of England	2
Plant Variation and Breeding	2
Injurious Insects	2
Forage Plants	2
Spraying of Plants	2
Veterinary Surgery	3
German or Latin	(16)-3
Horticulture	5
Analytical Chemistry	2½
Veterinary Practice	2½
Infantry and Artillery Drill	(13)-3
Thesis.	

MECHANICAL ENGINEERING COURSE.

FIRST CLASS.

FALL TERM.

Analytical Geometry, Mechanics	5
English Literature	4
Machine Design	5
Metallurgy	(18)-4
Shop Practice	5
Metallurgy	2
Mechanical Drawing	4
Infantry Drill	(14)-3

WINTER TERM.

Analytical Geometry, Calculus	5
Mechanical Engineering	5
Metallurgy	3
Strength of Materials	4
Military Science Lectures	(18)-1
Experimental Work in Engineering	5
Metallurgy	2
Mechanical Drawing	(11)-4

SPRING TERM.

Calculus	5
History of England	2
Mechanical Engineering	5
Strength of Materials	(15)-3
Experimental Work in Engineering	5
Metallurgy	2
Machine Design and Drawing,	2½
Infantry and Artillery Drill,	(12½)-3
Thesis.	

CIVIL ENGINEERING COURSE.

FIRST CLASS.

FALL TERM.

Analytical Geometry, Mechanics	5
English Literature	4
Railroad Engineering	5
Hydraulics	2
German or French	(19)-3
Civil Engineering	5
Mechanical Drawing	5
Infantry Drill	(13)-3

WINTER TERM.

Analytical Geometry, Calculus	5
Mechanics of Materials, Roofs and Bridges	5
Hydraulics	4
German or French	3
Military Science Lectures	(18)-1
Analytical Chemistry	5
Mechanical Drawing	(10)-5

SPRING TERM.

Calculus	5
History of England	2
Roofs and Bridges	6
German or French	(16)-3
Testing, Designing and Field Practice	7½
Mechanical Drawing	2½
Infantry and Artillery Drill	(13)-3
Thesis.	

Gathright Hall.

TEXT-BOOKS.

FOURTH CLASS.

AGRICULTURE: Physical Geography, *Maury.*

DRAWING: Bookkeeping, *Bryant and Stratton.*

ENGLISH AND HISTORY: Elementary Grammar, Advanced Grammar, *Patterson;* Composition, *Chittenden;* United States History, *Lee.*

MATHEMATICS: Arithmetic, *Greenleaf;* Algebra, *Wells.*

THIRD CLASS.

CIVIL ENGINEERING AND PHYSICS: Physics, *Carhart and Chute;* Electricity, *Thompson;* Roads, Streets, and Pavements, *Gillmore.*

DRAWING: Mechanical Drawing, *Anthony.*

ENGLISH AND HISTORY: Rhetoric, *Genung;* General History, *Myers.*

HORTICULTURE: Truck Gardening South, *Oemler;* Fruit Culture, *Thomas; Wood's* Manual; Structural Botany, *Gray.*

MATHEMATICS: Algebra, *Wells;* Geometry, *Wentworth.*

MECHANICAL ENGINEERING: Steam Engine, *Kinealy.*

VETERINARY SCIENCE: Comparative Physiology, *Mills.*

SECOND CLASS.

AGRICULTURE: Milk and Its Products, *Wing.*

CHEMISTRY: Inorganic Chemistry, *Storer-Lindsay;* Organic Chemistry, *Remsen;* Blowpipe Analysis, *Nason;* Qualitative Wet Analysis, *Miller;* Metallurgy, *Bloxam;* Geology, *Le Conte.*

CIVIL ENGINEERING AND PHYSICS: Surveying, *Davies, Raymond;* Sewers and Drains, *Adams;* Sewage Utilization, *Baker;* Field Manual for Railroad Engineers, *Nagle.*

DRAWING: Descriptive Geometry, *Faunce.*

ENGLISH AND HISTORY: English Language, *Meiklejohn;* History of England, *Buckley.*

LANGUAGES: German Grammar, *Joynes-Meissner;* Spanish Grammar, *De Tornos;* French Grammar, *Whitney;* Latin Grammar, *Coy, Gildersleeve;* Selected Readers and Literature.

HORTICULTURE: Physiological Botany, *Vines;* Entomology, *Packard;* Small Fruit Culture, *Fuller.*

MATHEMATICS: Algebra, *Wells;* Geometry, *Wentworth;* Trigonometry, *Wells.*

MECHANICAL ENGINEERING: Graphics, *Merriman;* Slide Valve, *Halsey.*

MILITARY SCIENCE: Drill Regulations.

VETERINARY SCIENCE: Veterinary Medicine, *Robertson.*

FIRST CLASS.

AGRICULTURE: Feeds and Feeding, *Henry.*

CHEMISTRY: Agricultural Chemistry, *Storer;* Industrial Chemistry, *Sadtler;* Metallurgy, *Blount and Bloxam;* Geology, *Le Conte.*

CIVIL ENGINEERING AND PHYSICS: Field Manual for Railroad Engineers, *Nagle;* Mechanics of Materials, *Merriman;* Hydraulics, *Merriman;* Roofs and Bridges, Parts I and II, *Merriman and Jacoby;* Hand Book, *Carnegie.*

DRAWING: Strength of Materials, *Mather.*

ENGLISH AND HISTORY: History of England, *Buckley.*

HORTICULTURE: Forestry, *Hough;* Viticulture, *Husman;* Landscape Gardening, *Long;* Plant Variation and Breeding, *Bailey;* Nut Culture, *Fuller;* Fungi and Plant Diseases, *Von Tubeuf;* Spraying of Plants, *Lodeman.*

LANGUAGES: German Grammar, *Joynes-Meissner;* German Prose, *Boisen;* Spanish Grammar, *De Tornos;* Latin Grammar, *Coy, Gildersleeve;* French Grammar, *Whitney.* Selected Readers and Literature.

MATHEMATICS: Analytical Geometry, *Nichols;* Elementary Mechanics, *Wood;* Practical Calculus, *Peck.*

MECHANICAL ENGINEERING: Machine Design, *Low and Bevis.*

MILITARY SCIENCE: United States Army Regulations.

VETERINARY SCIENCE: Veterinary Surgery, *Williams, Liautard:* Veterinary Anatomy, *Chauveau*; Materia Medica, *Bartholow,* Horse Shoeing, *Fleming;* Veterinary Obstetrics, *Fleming.*

SCHEDULE OF RECITATIONS.

In order to show definitely the manner in which the time of students is employed, the following schedule of daily work is appended.

Studies falling in the same hour are in different courses. Instructive work in the shops or laboratories is in this schedule designated as "practice." The larger classes are, as necessity may arise, divided into sections which may recite or work in the several departments at the same time under different instructors.

FALL SCHEDULE, 1898.

FIRST CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:40	1	English	English	English	English	Latin.
8:40- 9:30	2	German	Latin	German	Latin	German.
9:40-10:30	3	Mathematics	Mathematics	Mathematics	Mathematics	Mathematics.
10:30-11:20	4	Metallurgy	Metallurgy	Metallurgy	Metallurgy	
10:30-11:20	4	Veterinary surgery	Civil Engineering	Veterinary Surgery	Civil Engineering	Veterinary Surgery.
10:30-11:20	4	French		French		French.
11:20-12:10	5	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture.
11:20-12:10	5	Horticulture	Horticulture	Horticulture	Horticulture	
11:20-12:10	5	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering.
11:20:12:10	5	Civil Engineering	Civil Engineering	Civil Engineering	Civil Engineering	Civil Engineering.
12:10- 1:00	6		Chemistry	Chemistry	Chemistry	Chemistry.
2:00- 4:00		Chemical Practice		Chemical Practice	Veterinary Laboratory	Metallurgy.
2:00- 4:30		M. E. Practice	Agricultural Practice		M. E. Practice	
2:00- 4:30			Horticultural Practice			Horticultural Practice.
2:00- 4:30			Drawing	Drawing	C. E. Practice	C. E. Practice.
5:00- 6:00		Drill		Drill		Drill.

SECOND CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	French	German	French	German	German.
8:50- 9:40	2	Descriptive Geometry—1	Descriptive Geometry—1	Descriptive Geometry—1	Descriptive Geometry—1	Descriptive Geometry—1.
8:50- 9:40	2	Descriptive Geometry—2	Descriptive Geometry—2	Descriptive Geometry—2	Descriptive Geometry—2	Descriptive Geometry—2.
9:40-10:30	3	Entomology	Veterinary Medicine	Entomology	Veterinary Medicine	Latin.
9:40-10:30	3		Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering.
9:40-10:30	3	Civil Engineering		Civil Engineering		
10:30-11:20	4	Breeds of Stock	Breeds of Stock	Breeds of Stock	Breeds of Stock	Breeds of Stock.
10:30-11:20	4	Botany	Latin	Botany	Botany	Botany.
10-30-11:20	4	Mathematics—1	Mathematics—1	Mathematics—1	Mathematics—1	Mathematics—1.
11:20-12:10	5	Chemistry—2	Chemistry—2	Chemistry—2	Chemistry—2	French.
11:20-12:10	5	Latin	Mathematics—3	Mathematics—3	Mathematics—3	
12:10- 1:00	6	Chemistry—1 and 3	Chemistry—1 and 3	Chemistry—1 and 3	Chemistry—1 and 3	
12:10- 1:00	6	Mathematics—2	Mathematics—2	Mathematics—2	Mathematics—2	Mathematics—2.
2:00- 4:00					Drawing	Drawing.
2:00- 4:30						Chemical Practice.
2:00- 4:30		Horticultural Practice	M. E. Practice	M. E. Practice	Horticultural Practice	
2:00- 4:30		Agricultural Practice				
5:00- 6:00		Drill		Drill		Drill.

FALL SCHEDULE, 1898.

THIRD CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	English—4	English—4	English—4	English—4	English—4.
8:00- 8:50	1	Physics—1	Physics—1	Physics—1	Physics—1	
8:50- 9:40	2	English—2	English—2	English—2	English—2	English—2.
8:50- 9:40	2	Physics—3	Physics—3	Physics—3	Physics—3	
8:50- 9:40	2			Elementary Agriculture—4		Elementary Agriculture—4
9:40-10:30	3	English—1	English—1	English—1	English—1	English—1.
9:40-10:30	3	Mathematics—2 and 3	Mathematics—2 and 3	Mathematics—2 and 3	Mathematics—2 and 3	Mathematics—2 and 3.
9:40-10:30	3	Physics—4	Physics—4	Physics—4	Physics—4	
10:30-11:20	4		M. E. Lectures—S	M. E. Lectures—D	M. E. Lectures—S	M. E. Lectures—D.
10:30-11:20	4	Drawing—D		Drawing—S		
10:30-11:20	4	Mathematics—4	Mathematics—4	Mathematics—4	Mathematics—4	Mathematics—4.
12:10- 1:00	6	Botany		Botany	Botany	Botany.
12:10- 1:00	6	English—3	English—3	English—3	English—3	English—3.
12:10- 1:00	6	Mathematics—1	Mathematics—1	Mathematics—1	Mathematics—1	Mathematics—1.
12:10- 1:00	6	Physics—2	Physics—2	Physics—2	Physics—2	
2:00- 4:00		Drawing—D	Free-hand Drawing	Drawing—S		
2:00- 4:30		Agricultural Practice	M. E, Practice	Horticultural Practice	M. E. Practice	
5:00- 6:00		Drill		Drill		Drill.

FOURTH CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	English—1	English—1	English—1	English—1	English—1.
8:50- 9:40	2	English—3	English—3	English—3	English—3	English—3.
8:50- 9:40	2	Mathematics—1 and 2	Mathematics—1 and 2	Mathematics—1 and 2	Mathematics—1 and 2	Mathematics—1 and 2.
9:40-10:30	3	Physical Geography—A	Physical Geography—B	Physical Geography—A	Physical Geography—B	
9:40-10:30	3	Drawing—B	Drawing—A	Drawing—B	Drawing—A	
10:30-11:20	4	English—2 and 3	English—2 and 3	English—2 and 3	English—2 and 3	English—2 and 3.
11:20-12:10	5	English—1 and 2	English—1 and 2	English—1 and 2	English—1 and 2	English—1 and 2.
11:20-12:10	5	Mathematics—3	Mathematics—3	Mathematics—3	Mathematics—3	Mathematics—3.
12:10- 1:00	6	Drawing—A	Drawing—B	Drawing—A	Drawing—B	
12:10- 1:00	6	Physical Geography—B	Physical Geography—A	Physical Geography—B	Physical Geography—A	
2:00- 4:00		M. E. Practice	Physical Geog.—A and B	M. E. Practice		
5:00- 6:00		Drill		Drill		Drill.

GRADUATE COURSES.

Graduate studies in the Agricultural or Horticultural Courses lead to the Degree of Master of Science (M. S.); in the Mechanical and Civil Engineering Courses to the Degrees of Mechanical Engineer (M. E.) and Civil Engineer (C. E.) respectively.

It is required for admission to study for one of these degrees that the candidate be a graduate of this College, or of some other institution approved by the Faculty. He must select a major subject in the department in which his first degree was taken, and two minor subjects from allied departments, and one foreign language. The course of study will occupy two years, at least one of which must be spent in residence at the College. The student must pass satisfactory examinations upon the subjects of the course, and must submit an approved thesis.

Graduate students are under the general regulations of the College, but are not subject to military discipline; they may, however, be required to assist in preserving order in the barracks; and must give continued satisfaction in their studies.

The course of study must be selected from the following prescribed subjects. The selection must be submitted to and approved by the Faculty, and no change may be made without their permission.

AGRICULTURE.

Scientific and experimental work is offered graduate students in stock raising, feeding, culture of feed crops, or dairying for the purpose of extending their information and rendering them better capable of superintending these lines of work. The studies embraced are drainage and irrigation, studies in selection and cross-breeding to improve farm crops and forage plants, scientific investigations of milk, and the conduct of feeding and field experiments.

CHEMISTRY.

Quantitative analysis, physiological and industrial chemistry; theoretical and organic chemistry; agricultural chemistry; standard reference books; current chemical literature. Final thesis on original work.

CIVIL ENGINEERING AND PHYSICS.

A. Civil Engineering.

Advanced work is offered in the following subjects: Hydrographic surveying; hydraulic and water supply engineering; masonry construction; stereotomy; geodesy; least squares; strains in drawbridges and other continuous structures; theory of the strength of materials; experimental work with testing machines; designing; detail and shop drawing; thesis.

B. Physics.

Analytical mechanics and hydro-mechanics; advanced work in sound, heat, light, and electricity; work in the laboratory.

DRAWING.

Descriptive Geometry, *Watson.*
Shades and Shadows, *Lawrence.*

Such advanced work in drawing as may be needed by the student for his special course.

ENGLISH AND HISTORY.

A. English.

Anglo-Saxon and Norman-French origins of the language. Advanced studies in the literature.

B. History.

The beginnings of civilization and the principles of ethnology. Original investigation in some special line.

HORTICULTURE AND BOTANY.

A. Horticulture.

Propagation and improvement of cultivated plants; fertilization and cross-fertilization forestry; pomology; management of glass houses; entomology continued, including anatomy of types; laboratory work on classification; special study on insecticides and management of an apiary; experimental work throughout the two years in bybridizing, nursery work and management, and commercial gardening; assisting in other experimental work.

B. Botany.

Grasses continued, reading, laboratory work, and field experiments; mycology, thesis on special work, and original research with the microscope; microscopic work in plant history, including micro-chemistry and mounting; development of mosses and ferns; drawings and readings; collections of one hundred plant specimens; animals and plants under domestication; economic botany.

LANGUAGES.

The course in this department will embrace such studies and exercises as will lead to a thorough and practical knowledge of either the German or French language and literature.

MATHEMATICS.

Advanced Analytical Geometry; Differential and Integral Calculus; Analytical Mechanics; Differential Equations.

MECHANICAL ENGINEERING.

Continuation of fourth year's work and Steam Engine (by Rankine) begun in first year. Experimental work in the machine shop; Steam Engine (Rankine) completed; special subjects and original designing in second year. Practice same as in fourth year.

ELECTIVE COURSES.

Elective courses, extending through two years, are offered, subject to the following conditions; the students in these courses to be known as irregular students:

1. To enter upon an elective course the student must be able to comply with the requirements for admission to the Third Class. He must elect, *in conformity to the regular schedule,* studies for which he is qualified, amounting to at least *eighteen* hours per week, and practice amounting to at least *seven* hours per week for each term, besides drill as given

to regular students; his selection to be subject to the approval of the Committee on Elective Courses. In his second year all his work must be selected from classes above the third.

2. A student in an elective course, upon the completion of the equivalent of two full years' work, as defined above, shall be entitled to a certificate signed by the President and the heads of the departments in which he studied.

3. A regular student may enter upon an elective course only with the consent of his parent or guardian and of the Faculty, and only at the beginning of a term. He shall receive no credit for work done, during the year in which he makes the change, in any department which he drops on becoming an irregular student.

4. An irregular student shall not be allowed to do more than sixty hours' voluntary work per month under the student labor system.

5. Irregular students shall be subject to military duties and to the Rules and Regulations just as are regular students.

SPECIAL COURSES.

Upon correspondence with the President, special industrial courses may be arranged with the professor or professors under whom instruction is desired; such courses, however, will not be encouraged, and a student, after having entered a regular course, will not be allowed to change same without permission of the Faculty.

GRADES, REPORTS, EXAMINATIONS, AND ADVANCEMENT.

Records of the standing of each student are kept by the professors of the several departments. This standing is indicated by a system of marks based upon 100 as a maximum, with decimal gradations.

A monthly report is mailed to the parent or guardian of each student, showing his class standing, conduct and health.

Examinations are held from time to time during the session, as special subjects of study may be completed.

Students who attain in any subject an average monthly grade as high as 85 in the Third or Fourth class, 90 in the Second class, 95 in the First class, are exempt from standing the examination, except in the following cases:

(1) When a student has been absent from as many as one-tenth the entire number of recitations in the subject.

(2) When the subject is given by lectures, or for any other reason the instructor is not satisfied with the student's monthly average.

A student's final grade in any subject is determined by averaging his term grade, if any, with his examination grade, if any. Then, provided the examination grade be not below 55, he will be passed on a final grade of 66 in the Third and Fourth classes, of 70 in the First and Second.

In subjects where no examination is given, the student, in order to pass, must have a term grade at least as high as the passing grade of his class, and must complete a certain amount of practice or work prescribed by the professor in charge.

A student who has been found deficient on any subject will be given a second examination; but he must make the passing grade of his class thereon, without taking into account his term grade. This second examination will not affect his class standing.

No student will be given more than two examinations on one subject; provided:

(1) A student who has failed on a second examination may be examined again at the opening of the next session.

(2) A member of the First class who has failed on a second examination upon one subject only, but has complied with all the other requirements for graduation, may, by the consent of the Faculty, be given a third examination upon that subject during the week before Commencement.

Advancement from one class to the next higher (except to the First) is governed by the following provisions:

(1) A student who has attained a passing grade upon all his studies will be reported as "passed," and may enter the next higher class unconditionally.

(2) A student who has been found deficient in not more than two subjects will be reported as "passed conditionally," and may enter the next higher class, but must remove his "conditions" by making the required passing grade at some time during the next session, or within a shorter time if prescribed by the Faculty.

(3) A student who has been found deficient in more than two subjects shall not be allowed to enter the next higher class except by making the required passing grade, at the opening of the next session, upon all but one of the subjects in which he was deficient.

No student will be admitted to the first class with any conditions still unremoved.

Yentje Netherland: (H. F. H. B. 27591.)

Twelve and one-half Gallon Holstein Cow, bred and owned by the Texas Agricultural and Mechanical College.
Daily Record: 12 gals., 2 qts. and 1½ pts. of milk; 4 lbs. 1½ ozs. butter. Seven-Day Record: 88 gals. of milk (707.5 lbs.); 22 lbs. butter.
Thirty-Day Record: 370 gals. of milk (2959 lbs.); 85.95 lbs. of butter.

CERTIFICATES.

Every student who completes satisfactorily a special course, or a two years' elective course, or one of the optional studies, will be granted a certificate.

GRADUATION.

A diploma of the College, with the degree corresponding to the course of study pursued, will be granted students who complete one of the prescribed courses and pass satisfactory examinations on all the branches embraced therein. Each candidate for graduation is required to prepare a thesis upon a subject bearing upon his work in some scientific or practical department. The subject must be approved by the Faculty, and the thesis by the head of the department in which it was written.

The diploma fee is five dollars.

HONORS.

The three students of the graduating class who have the best records for scholarship and deportment are known as honor men; but this rule may be modified if the number of students in any class or their scholarship shall not warrant such distinction.

In each of the lower classes the three students having the highest general average in all their studies, and also in each department the three students of the several classes whose final grades are highest, are announced at commencement as "distinguished."

DEPARTMENTS OF INSTRUCTION.

DEPARTMENT OF AGRICULTURE.

Professor Connell,
Assistant Professor Soule.

This department instructs the students of the Fourth Class of all courses, and other classes taking the Agricultural Course. The studies are systematically arranged for the purposes of applying many of the scientific principles of chemistry, botany, physiology, and physics (which are taught by the other departments of this course) to the practical subjects of "Field Crops" and "Live Stock Husbandry." A knowledge of these sciences forms the basis of the instruction given in the class room by the Agricultural Department. The study of physics gives accurate information and offers useful explanations of those primary laws of nature that control light, heat, sound, water, the atmosphere, solids, electricity, etc. A knowledge of these subjects is necessary to a clear understanding of changes in atmospheric temperature, rainfall, frost, evaporation, and other physical phenomena of importance to the farmer. The study of botany informs the student of scientific names and classification of plants into natural groups, their habit of growth, and treats of the laws that govern the essential conditions of plant growth. The study of zoology, including the subdivisions, animal anatomy and physiology, proper hygienic conditions, the diagnosis of disease, and a study of the necessary medical or surgical treatment of animals, forms an important division of the student's technical education. The study of chemistry serves to give the student an intimate knowledge of the composition of plants (and plant food), and of animal bodies (and stock food), and of the laws governing the composition of plant and animal nutrients.

Physical geography is the first study taught by the Agricultural Department. The distribution of industries and their relationship are considered. This study familiarizes the student with agricultural and other industrial conditions in all parts of the world. The principles of "Stock Breeding" are next considered. This is followed by a study of the recognized "Breeds of Live Stock" which have been formed by the application of the scientific principles of heredity, variation, etc. This subject is amply illustrated in the pure bred stock owned by the College. From breeds and breeding attention is turned to the subject of supplying animals with necessary "Grasses and Forage Plants." "Dairying" is next taught, and the student is made familiar with the various methods of handling milk in the production of butter and cheese. In the fourth, or graduating year, all of the various styles of farming and stock raising are discussed and studied separately. Instruction is also given in the scientific principles of stock feeding and in irrigation and drainage.

THIRD CLASS.—Having begun the study of botany, this class undertakes the subject of "Grasses and Forage Plants" in the Agricultural Department. Each of these is considered with reference to habit of growth, methods and cost of seeding, its effects upon the soil, its adaptability to various portions of the State, feeding value, etc. All Texas feed crops, except fibre plants, are included in the study of this subject. It is taught in the spring term in thirty-six lectures, by reference books, and by practice with forage crops.

The various breeds of horses, cattle, swine and sheep are carefully studied as to origin, history development, and leading characteristics of the various classes of domestic animals. Students are trained by practice in judging stock of the different breeds, good specimens of which are found in the large herds owned by the College.

Second Class.—The principles of "Stock Breeding" are taught in this class, basing the instruction upon the student's knowledge of animal physiology, with which it is nearly related. Heredity, atavism, variation, selection and in-breeding, and their practical application to domestic animals, are noted. The students are also practiced in scoring and judging farm animals, and drilled in their selection, purchase, care and management by practice in measuring and scoring the live stock. This subject is taught during the fall term.

Dairying is given considerable prominence. The second class receives thirty-two lectures upon this subject. The properties and composition of milk, the variations due to breed, feed and fermentation of milk; the creaming, churning, cheese- making, testing for fat, and for adulterations; and the subject of bacteriology, are all discussed in order. The creamery building is thoroughly fitted with the latest improved machinery, and apparatus. Students of the second class use this equipment freely in performing the practical work and in the dairy practice required. The proper care of fresh milk, the operation of hand and power separators and churn, the care of creamers, and testing for acidity and for butter fat in milk and cream, can be most thoroughly learned by combining this work with the theory taught in the class-room. All of the labor of a large machine dairy is performed by students. The aim is to thoroughly fit our students for taking charge of and operating creameries and dairy farms successfully in any portion of the State.

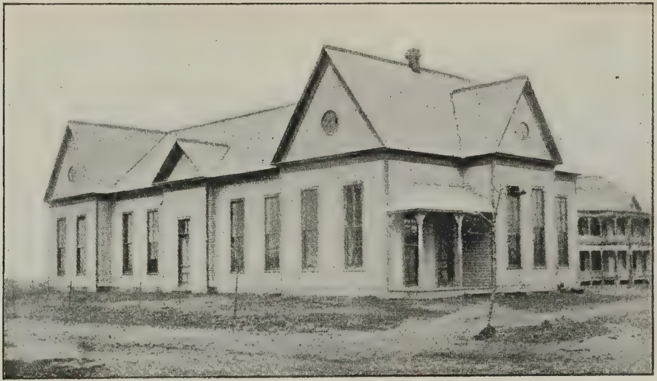
"Irrigation and Drainage" is studied by lectures given in the class-room during the spring term. The advantages of the several methods of irrigation in use are considered, the amount of water necessary for the various crops, the available water supply of all parts of the State are studied, and further time is given to the construction and location of reservoirs, laying out head ditches, construction of flumes, and the cost of raising and applying water under conditions existing in this State. Methods of securing perfect drainage are discussed, and the methods of protecting lands from washing rains, terracing farm lands, the construction of open and tile ditches are considered. A reservoir watering fifteen acres of land is in use on the College grounds, affording opportunity for the demonstration of many principles relating to irrigation. Some four miles of tile drain have been laid on the farm.

First. Class.—Having studied animal anatomy and physiology and the subject of chemistry, the students of the first class are prepared to understand the study of scientific or rational feeding of farm animals—the study of which is begun in the fall term and pursued for two terms in the first class. The laws of animal nutrition and the composition of animal bodies are briefly considered. The individual food stuffs are then closely studied as to composition, digestibility, market value, etc. The student is then advanced to the proper feeding rations for the support of milk cattle, beeves, horses, and hogs. In this manner the economic value of all food stuffs is clearly shown in theory. During the afternoon the practical feeding of farm animals by students serves to more fully acquaint them with this subject. The best results in feeding stock by the various experiment stations of the United States, form a most valuable feature of studies devoted to this subject. Students who complete the study are well qualified to care for and manage stock farms and various feeding enterprises.

The study of "Farm Management" and the various systems of organization of farm work practiced in this State completes the study of the Agricultural Department in the fourth year, or graduating class. Comparisons are made of the different branches of agriculture, rotative and successive cropping, management and economy of farm labor, selection and care of machinery, and live stock for certain purposes, and general suggestions as to profit and loss in farming.

Practice and Work.—Work is required of each student taking the course in Agriculture. This brings him in close contact with the crops of cotton, corn, grasses, grains, the live stock, creamery, and keeps him in sympathy with all industrial enterprises and the studies pursued in the class-room. The feeding of animals for experiment in the production of milk, pork, and beef, is often done by students under the close supervision of a College officer. For voluntary work faithfully performed, students are paid at a maximum rate of twelve cents per hour. Careless effort is not paid for. The twenty-four hundred acres in the farm, with one hundred and twenty milk cows (consisting of typical Jerseys and Holsteins and grades), the hogs, the live stock, the improved tools and machinery for all farm work, the mammoth silos for preserving green stock food, offer illustrations of great practical value to the student.

Agricultural Experiment Station.—The permanent location by the General Government of the Agricultural Experiment Station for Texas at this College, under the supervision of a Director (who is also the Professor of Agriculture) makes it possible to give students the benefit of experiments conducted at the College, as well as permitting a careful study of results of valuable tests conducted elsewhere, by frequent reference to bulletins from other Stations, files of which are kept in the Director's office. A valuable collection of scientific works bearing on all phases of agriculture constitutes the Station library, and is accessible at all times to students of the College.



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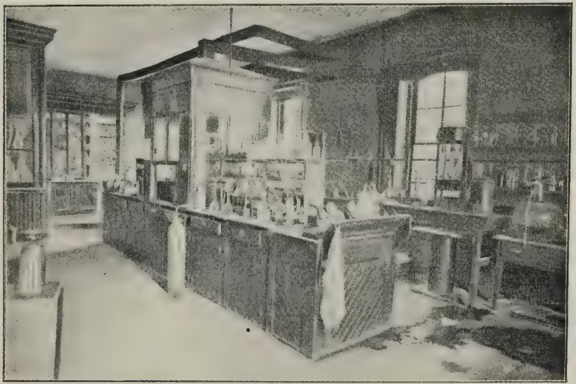
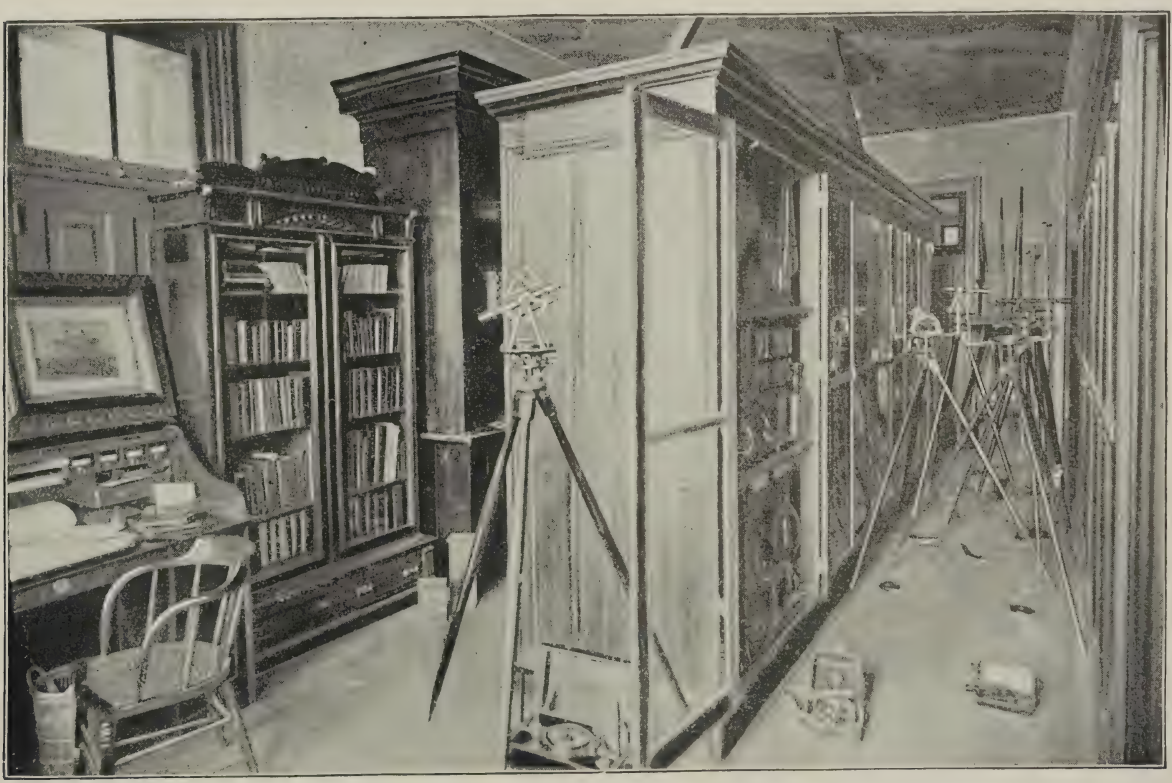


PRIVATE LABORATORY.

STUDENTS' LABORATORY.



Interior of Store-room—Department of Civil Engineering and Physics.

DEPARTMENT OF CHEMISTRY AND MINERALOGY.

Professor Harrington,
Associate Professor Tilson.

CHEMISTRY.

The subject of chemistry is introduced by the study of inorganic chemistry, passing into a brief course of organic chemistry. The attention of the students is directed to the historical development of the science, and to the phases of chemical theory as at present understood by chemists.

After the general principles of chemistry are understood, the study will be supplemented by practical work in the laboratory. This work begins with the use of the blow-pipe, simple glass working, and fitting up of apparatus, continuing into quantitative analysis, both gravimetric and volumetric, with exercises in manufacturing chemistry also.

MINERALOGY AND METALLURGY.

The course in Mineralogy will be made as thorough as time will allow. Work in this department begins in the second class, during which time much attention is given to the systematic examination of minerals. The study is continued in connection with geology and metallurgy, special attention being given to the economic aspect of geology and to the metallurgy of iron and copper. Assaying, as practiced in connection with mines and metallurgy, is taught to students of the Mechanical Engineering course.

It is the object of the Department of Chemistry and Mineralogy to make the course of study thorough and practical, and as far as possible to equip students with information that will be at once available on leaving College.

The laboratory is well supplied with chemicals, minerals, glass, porcelain and platinum ware, gas holders and generators, filter pumps, with assay furnaces, muffles, crucibles, etc.; combustion furnaces, arrangement for Kjeldahl's nitrogen determinations; Hempel's and Elliott's gas apparatus, a Soliel-Laurent and Schmidt and Hench saccharimeters, colorimeter, reflecting goniometer, Crouch's best binocular microscope, with fittings, etc. In short, the laboratory is well supplied with the latest improved apparatus needed in well established methods of analytical work and original investigation. Our balance room contains analytical balances of the finest quality.

The department is supplied with books and current chemical literature, to which the students have free access.

DEPARTMENT OF CIVIL ENGINEERING AND PHYSICS.

PROFESSOR NAGLE.
ASSISTANT PROFESSOR SPENCE.

A. CIVIL ENGINEERING.

As shown in the course of study, the Mechanical and Civil Engineering courses are identical up to the beginning of the second term of the third class (second year). The student electing Civil Engineering now takes up studies bearing more directly upon his future work.

THIRD CLASS.—The subject of road making and maintenance extends through the spring term for two hours per week.

SECOND CLASS.—In the fall term the Civil Engineering students study the construction of sewers and drains. In the winter term they begin plane surveying, continuing it in the spring term. Railroad engineering is also taken up in this term. Field practice is given for five hours per week during the spring term.

Students in all other courses take plane surveying for three hours per week, and in addition to the class-room instruction five hours per week of field practice in the use of the compass, transit, and wye level is given. Each student is required to submit a plat and profile compiled from surveys made by himself. This subject extends through one term.

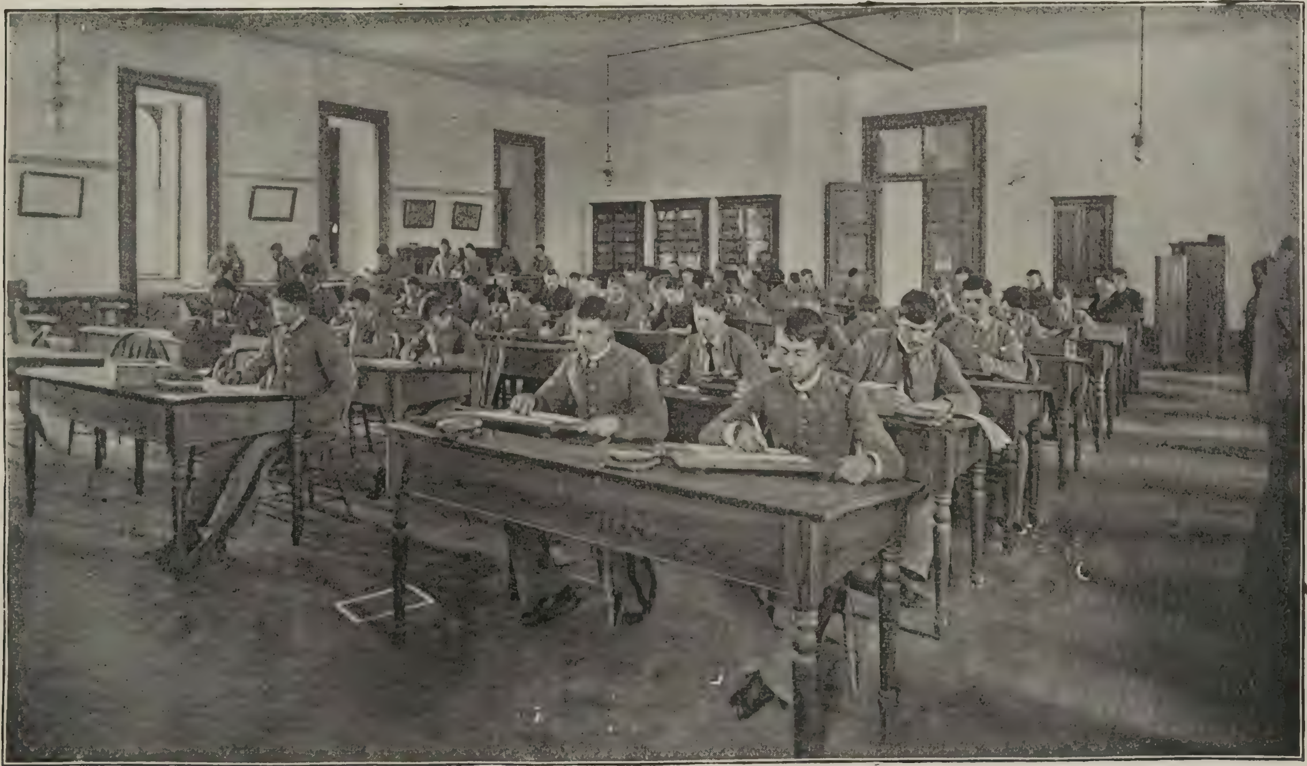
FIRST CLASS.—Railroad engineering is continued, and the study of the projection, location, and setting of slope stakes on a line is undertaken in the field, and the quantities afterwards computed.

The mechanics of the materials of engineering and the computation of the stresses in roofs and bridges are next taken up and many numerical problems assigned. These subjects extend through two terms.

The study of hydraulics is begun in the fall term, and extends through the winter term. Many numerical problems, involving the flow through orifices, weirs, pipes and open channels, etc., must be worked out by the student.

In the spring term a course in bridge and structural designing is given, in which the design of some simple roof truss or non-continuous bridge truss is undertaken, each member of the class being assigned a special truss, upon which he is required to spend about five hours per week in the drawing room, making detail and shop drawings, showing the dimensions of main members and connections, together with a stress sheet for the structure.

Text Books: Roads, Streets and Pavements, *Gillmore;* Surveying, *Davies, Raymond;* Field-Manual for Railroad Engineers, *Nagle;* Sewers and Drains, *Adams;* Sewage Utilization, *Baker;* Hydraulics, *Merri-*



Interior of Drawing Room.

man; Mechanics of Materials, *Merriman;* Roofs and Bridges, Parts I and II, *Merriman and Jacoby.*

Graduate Work.—Young men desiring to become successful professional engineers will find it advisable to continue their studies after receiving their first degree. Under the head of "Graduate Studies" are outlined some of the branches in which advanced work will be given—the work assigned being adapted, in so far as is practicable, to the needs of each student. Designing, preparation of shop drawings for the design, the study of projects and review of existing structures will make a feature of the course. A large part of the time will be devoted to original design and investigation.

B. PHYSICS.

Third Class.—The entire third class study the general properties of matter, mechanics, pneumatics, hydrostatics, acoustics, heat and optics. Agricultural students take a short course in electricity and magnetism, while the Mechanical and Civil Engineering students take a more extended course in the same subject. The work of the former covers two terms, while that of the latter extends through the entire session.

Text Books: Elementary Physics, *Carhart and Chute;* Electricity and Magnetism, *Thompson.*

EQUIPMENT.

The department is supplied with an excellent assortment of engineering instruments, including the following: One transit with Gurley's solar attachment: one railroad transit; one surveyor's transit; four engineer's Y levels; one drainage level; one terracing level; one Locke's hand level; one solar compass; four other compasses; one plane table; one planimeter; one odometer; one surveyor's cross; one reflecting prism for setting off right angles; one Thatcher calculating instrument; one Colby topographical protractor; one Colby slide rule for stadia reductions; and an abundant supply of tapes, chains, pins, flag poles, leveling rods, stadia rods, etc. The department own two fine Riehle Bros. testing machines—one of one thousand pounds capacity for cement and mortars, and the other of twenty thousand pounds capacity, arranged for tension, compression and cross-breaking; also, several large-sized models of various types of trusses, blue prints of detail and shop drawings, photographs of existing structures, etc.

The supply of physical instruments is sufficient for illustrating and verifying the laws enunciated in the text-books studied. A fine high-frequency coil, arranged for producing the Roentgen ray phenomena, has recently been added.

The department is supplied with a well assorted library of standard works on engineering and physics, to which the students have access.

DEPARTMENT OF DRAWING.

PROFESSOR GIESECKE.
ASSISTANT PROFESSOR SPENCE.

DRAWING.

The study of drawing is begun in the fourth class for all students with Thompson's Freehand Drawing Book No. 5, and Model and Object Book No. 1.

The Agricultural and Horticultural students continue the freehand drawing in the third class, and receive enough instruction in mechanical drawing to enable them to make the plats necessary in their study of surveying.

The Engineering students begin mechanical drawing in the third class. During the first term they draw nine plates of simple exercises, geometrical problems, alphabets and lettering; during the second and third terms they draw fourteen plates of exercises in projection drawing, and make three paper models. Anthony's Mechanical Drawing is used by this class.

During the first term of the second class, descriptive geometry is taught by daily recitations and the students are required to draw twenty plates of problems, or applications thereof. Faunce's Descriptive Geometry is used. During the next two terms the students are required to draw sixteen plates of working drawings of parts of machinery, bridges or buildings; three of the above plates are isometric views, and one has to be traced and blue-printed; the students prepare the paper for this purpose.

During the first term of the first class, tinting and linear perspective are taught; each student makes one finished plate in colors and one perspective drawing; during the remainder of the session each student makes drawings of subjects in mechanical engineering, civil engineering, or architecture, the purpose being to give him more practice in drawing and to acquaint him with the details of construction.

MATERIALS OF CONSTRUCTION.

In the last two terms of the first class the students in the Mechanical Engineering course study Mather's Strength of Materials, and test the strength of different materials of construction on a Riehle testing machine having a capacity of 20,000 pounds.

WRITING AND BOOKKEEPING.

In the fall term of the fourth class all students are instructed in the American system of vertical writing; in the winter and spring terms they take the intermediate course of the Ellis system of Practical Bookkeeping and Business Practice.

DEPARTMENT OF ENGLISH AND HISTORY.

PROFESSOR HUTSON.
ASSOCIATE PROFESSOR PHILPOTT.
ASSISTANT PROFESSOR SOUTH.

In this department the course extends through the whole college life. Its aim is to make accurate and well informed scholars. In the lower classes the subjects are taught in parallel lines of progress, and are made to throw light on each other.

I. ENGLISH LANGUAGE AND LITERATURE.

First Year: In the class of this year there is an extended drill in the grammar, in spelling, punctuation, reading, and composition. The class reads from time to time some famous literary work of simple and vivid narration.

Text Books: *Patterson's* Elements of Grammar, *Patterson's* Advanced Grammar, *Chittenden's* Elements of English Composition, *Macaulay's* Lays of Ancient Rome, select poems of Scott.

Second Year: Rhetoric is studied during the whole of this year.

Text Books: *Genung's* Rhetoric, and Essays of Macaulay.

Third Year: The class of this year studies the higher and idiomatic constructions of English and the history of the language. Essays, forensic disputations, and original orations constitute part of the work of the year.

Text Books: *Meiklejohn's* English Language and Literature. Select poems and tales.

Fourth Year: This year is devoted to a course of lectures on English literature.

Text Books: Select plays from Shakespeare.

For reference: The Century Dictionary, *Lounsbury's* History of the English Language, *Taine's* English Literature, *Saintsbury's* Elizabethan Literature, *Morley's* English Literature, *Mrs. Oliphant's* Literature of the Georges.

II. HISTORY.

First Year: The class of this year studies the History of Texas and the History of the United States. Good wall maps furnish a valuable help in these studies.

Text Books: *Pennybacker's* Texas, *Lee's* United States.

Second Year: The study of general history occupies the class of this year. Debates and compositions on historical subjects are frequently assigned as part of the work. The value of collateral reading is thus impressed upon the student.

Text Books: *Myers'* General History, with other works for collateral reading.

Third Year: This year is devoted to the History of England, especial stress being laid on the development of the English Constitution, the progress of civilization, and the close connection between the condition of the people and the state of the literature.

Text Book: *Arabella Buckley's* History of England.

Fourth Year: The study of the History of England is continued this year.

Text Book: History of England, *Buckley.*

For reference: Histories of *Green, Gibbon, Hallam, Freeman, Stubbs, Froude, Guizot, Ranke, Motley, Mommsen, Percy Greg.*

The College library is emphatically the tool house of this department. Students are urged and encouraged in every way to make large use of it.

Candidates for admission into the fourth class are examined on spelling, grammar, geography, and reading. Applicants for admission into the higher classes are examined on the studies already passed over by the classes below. See pages, 24, 25, 26.

PEACH ORCHARD.

DEPARTMENT OF HORTICULTURE, BOTANY, AND ENTOMOLOGY.

Professor Price.
Assistant Professor Ness.

The design of the course in Horticulture is to combine with the technical work of the department such instruction in related sciences and general education as will best prepare the student to meet the greatest demands of the horticultural industry. Throughout the course, instruction is given in subjects of general importance not enumerated below.

The existence of the vegetable kingdom being necessary to the maintenance and support of the animal kingdom, it is a special object all through the teaching in this department to make the student familiar with the laws which govern plant growth and propagation.

Special stress is laid upon the principles underlying the successful growth and management of the horticultural crops best adapted to the soil and climatic conditions of Texas.

For the first two years the courses in horticulture and agriculture are the same.

HORTICULTURE.

Fruit Culture.—*Second Year, Fall Term:* Study of growth, culture, and propagation of the apple, pear, peach, plum, apricot, cherry, etc. Planting and managing orchards.

Text Book: *Thomas'* American Fruit Culturist.

Reference Books: *Barry's* Fruit Garden; *Downing's* Fruit and Fruit Trees of America.

Olericulture.—*Second Year, Spring Term:* Growth, culture, preservation and marketing vegetables. Practice in the gardens and experimental plats.

Text Books: Truck Farming for the South, *Oemler;* Sweet Potato Culture for Profit, *Price.*

Reference Books: The Vegetable Garden, *Vilmorin-Andriaux;* The Forcing Book, *Bailey.*

Small Fruit Culture.—*Third Year, Spring Term:* Special lectures upon the culture and marketing of strawberries, raspberries, blackberries, dewberries, etc.

Reference Book: Small Fruit Culture, *Fuller.*

Viticulture.—*Fourth Year, Fall Term:* Culture, growth, and propagation of the grape and the management of vineyards.

Text Book: American Grape Growing and Wine Making, *Husmann.*

Reference Book: The Grape Culturist, *Fuller.*

FORESTRY.—*Fourth Year, Winter Term:* The management and planting of woodlands. Consideration of the role they play in the economy of nature.

Text Book: Elements of Forestry, *Hough.*

Reference Book: North American Sylva, *Michaux.*

LANDSCAPE GARDENING.—*Fourth Year, Winter Term:* Designing, planning, and management of lawns. The art of beautifying American homes.

Text Book: Ornamental Gardening, *Long.*

PLANT BREEDING.—*Fourth Year, Spring Term:* How to cross fertilize plants and originate new varieties. How to improve old varieties. Darwinism and its relation to horticulture.

Text Book: Plant Breeding, *Bailey.*

Reference Books: Origin of Species, *Darwin;* Survival of the Unlike, *Bailey.*

SPRAYING.—*Fourth Year, Spring Term:* How to prepare fungicides and apply them to plants to prevent injury by fungi. Spraying machinery.

Text Book: The Spraying of Plants, *Lodeman.*

NUT CULTURE.—*Fourth Year, Fall Term:* Planting and managing pecan orchards, etc.

Text Book: The Nut Culturist, *Fuller.*

BOTANY.

ORGANOGRAPHY.—*Second Year, Fall Term:* Gross anatomy, the study of the organs with which plants do their work; as roots, stems, leaves, and flowers. Their various forms and modifications.

SYSTEMATIC.—*Second Year, Spring Term:* Nomenclature, classification, description of flowering plants, and the art of collecting, naming, mounting and preserving them. An herbarium may be required.

HISTOLOGICAL.—*Third Year, Fall Term:* Advanced work in structural botany; examining the minute structure of the root, stem, leaf, flowers, and fruit, with compound microscope.

PHYSIOLOGICAL.—*Third Year, Fall Term:* Physiology of plants in connection with microscopic work. The student prepares his own slides; making notes, drawings, and employing reagents. In the latter part of the term the student begins the study of cryptogams.

Text Books: *Bastin's* College Botany; Histology of Plants, *Vines; Wood's* New Class Book of Botany.

Reference Books: *Chapman's* Southern Flora; Text Book of Botany,

VINEYARD.

Bessy; Sach's Botany; Physiology of Plants, *Vines; Gray's* New Class of Botany; Flora of Western Texas, *Coulter; Gray's* Field and Forest Botany.

GRASSES AND FORAGE PLANTS.—*Fourth Year, Spring Term:* Analysis of important grasses and forage plants. Their uses, habits, and cultivation.

Reference Books: Grasses of North America, *Beal;* Farmer's Book of Grasses and Forage Plants, *Phares; Vasey's* Bulletins on Grasses; *Gray's* New Class of Botany.

MYCOLOGY.—*Fourth Year, Fall and Spring Terms:* Systematic study of economic fungi in the Fall Term, and in the Spring Term the student makes culture on media, infects living plants, and prepares and applies fungicides. An herbarium of fungi is required. The subject is taught by lectures, together with laboratory practice.

Reference Books: Comparative Morphology and Biology of Fungi, *De Bary; Plowright's* Monograph of Uredineae and Ustillagineae; *Burrill's* Monograph of Uredineae and Erysipheae; United States Government and Experiment Station Reports; North American Pyrenomycetes, *Ellis* and *Everhart;* Diseases of Plants Induced by Cryptogamic Parasites, *Freiherr Von Tubeuf.*

ENTOMOLOGY.

STRUCTURAL.—*Third Year, Fall Term:* External anatomy and comparative morphology of the orders and more important families. Practice given in laboratory in dissecting and classifying.

ECONOMIC.—*Fourth Year, Spring Term:* Injurious insects, and the methods of preventing their depredations. Spraying machinery, insecticides, and their application.

Text Book: Entomology for Beginners, *Packard.*

Reference Books: Insecta, *Hyatt* and *Arms; Comstock's* Manual of Entomology; Insects Injurious to Fruits, *Saunders;* Economic Entomology, *Smith.*

EQUIPMENT.

The department is fairly well equipped with compound microscopes. There are 150 volumes in the department library, which contain information bearing upon the subjects taught. The student has free access to these. The department has a complete file of all the bulletins issued by the different experiment stations of the United States on the subjects of horticulture, botany, and entomology.

The herbarium contains a fair collection of a large part of the flora of the State, together with 500 species of fungi, which serve to illustrate the work in botany.

The care of the orchards and vineyards, and the experiments with vegetables, afford ample practice in field work. Students of the third class have charge of a nursery, where various trees are propagated.

Recently, the United States Department of Agriculture has started experiments here in Forestry, which will serve somewhat to illustrate the teaching in Forestry.

DEPARTMENT OF LANGUAGES.

PROFESSOR BITTLE.
ASSISTANT PROFESSOR SOUTH.

It is the object of the department to furnish students of the Horticultural and Civil Engineering Courses, and others who may desire it, with a practical knowledge of German, Latin, French, or Spanish, such as will benefit them in the prosecution of a scientific career.

To this end, the text books used and the method of imparting instruction are practical. Latin is taught as an essential to a thorough understanding of English: German and French, because neither the specialist nor the general student can afford to be ignorant of those literatures; Spanish, in view of the rapidly growing intercourse between us and the Latin Republics south of us; all of them, because systematology and scientific nomenclature are unintelligible without a knowledge of foreign languages.

Students coming to us, therefore, from the high schools of the State find here the opportunity to continue their linguistic studies by the side of agricultural and mechanical branches, to which those studies lend effective aid.

TEXT BOOKS.

In Spanish, De Tornos' Grammar, with references to Knapp, and selections in reading from various sources.

In German, Joynes-Meissner's Grammar, with selections in reading suited to the student's advancement.

In French, Whitney's Grammar is used, and readings, mainly of a scientific character, are selected.

In Latin, Chase and Stuart's Grammars, with reference to more systematic courses, and readings from Caesar, Vergil, Cicero, etc., as the exigencies of the course permit.

Mechanical Engineering Building.

DEPARTMENT OF MATHEMATICS.

Professor Puryear.
Associate Professor Smith.
Adjunct Professor Banks.

Instruction in this department is given by the use of approved text-books, supplemented by oral explanations and lectures. The course is designed to be thorough rather than extensive. The student's knowledge of the subject studied is tested daily at the blackboard, and he will be required to apply the principles taught to the solutions of practical problems. Written solutions of selected problems will be required at stated intervals. For specimen entrance examinations, see pages 24, 25, 26.

The subjects pursued are as follows:

First year—Arithmetic, Elementary Algebra.

Second year—Algebra, Plane Geometry.

Third Year—Advanced Algebra, Solid Geometry, Trigonometry.

Fourth year—Analytical Geometry, Mechanics, Calculus.

For instruction in geometry, the department is supplied with a full set of Schroeder's models, imported for this institution.

Text Books: Arithmetic, *Greenleaf*; Algebra, *Wells*; Geometry, *Wentworth;* Trigonometry, *Wells;* Analytical Geometry, *Nichols;* Mechanics, *Wood;* Calculus, *Peck.*

DEPARTMENT OF MECHANICAL ENGINEERING.

Professor Whitlock.
Assistant Professor Burgoon.
Assistant Professor Kerr.
Instructor Lewis.

This department is intended so to combine theory and practice that, after deriving a theoretical knowledge of the subject from the text-books of standard writers, the student may go into the shop and apply that knowledge in a thoroughly practical manner. With this theoretical preparation, the mind grasps the salient points and avoids the difficulties of the more practical part of the work. The work is carried on by aid of practice in the shops and drawing room, and by text-books and lectures.

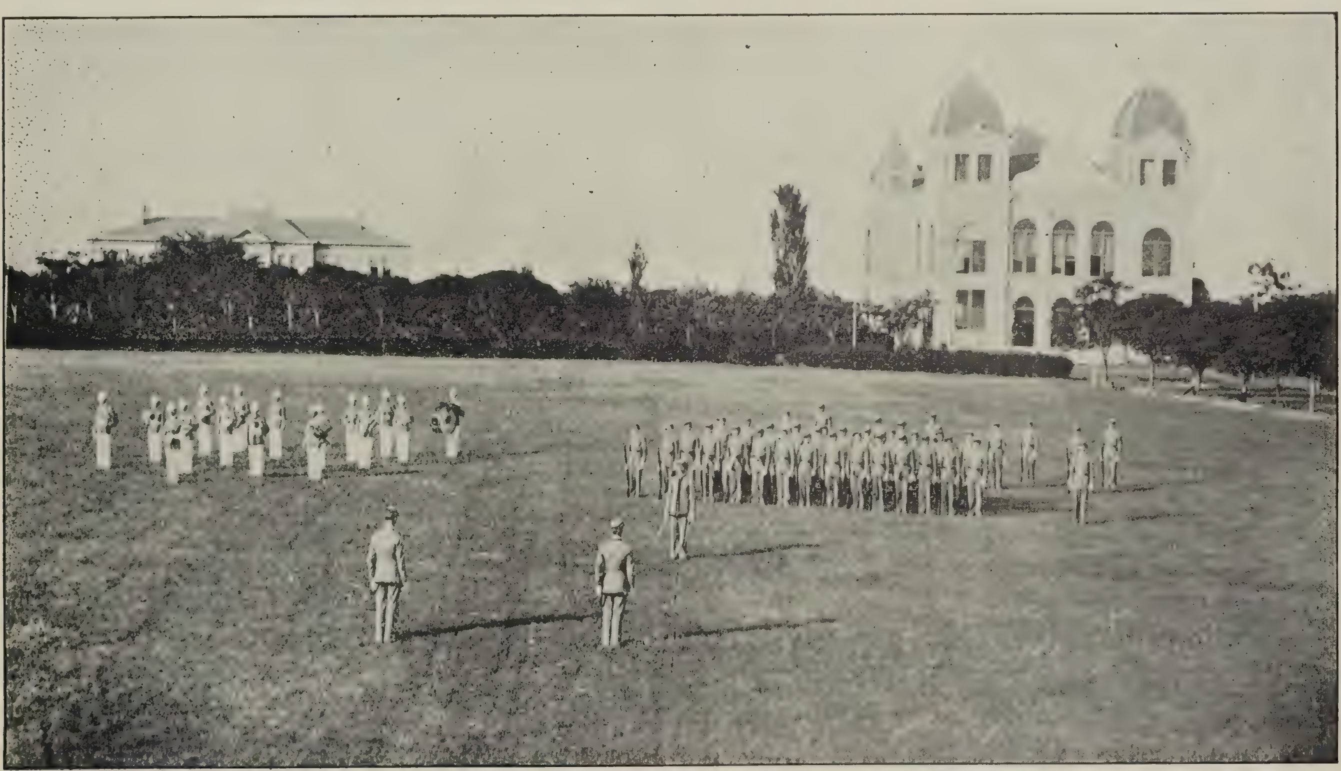
First, the machinery of transmission is taken up and discussed, and especial attention paid to shafting belts, speed pulleys, gear wheels, and kindred subjects. These lead the way to the higher forms of mechanism, and later the steam engine in its general principles and various forms is studied and discussed.

As stated above, the work in the class room is supplemented in every possible way by showing the student the practical application of these principles in the machinery used at the College.

SHOPS, AND SHOP WORK.

The Machine Shop is a one-story brick building, 80x35 feet, and is joined at one end by the Blacksmith Shop, which is also brick, 20x35 feet. At the other end it is in connection with the Carpenter Shop, and above the latter are class rooms, and model room, fitted up for drawing and designing. This two-story building is also of brick, and was planned and built especially for this department. In beginning the practical work the student enters the Carpenter Shop, which is equipped with sixty sets of tools and benches. Here each student has his own set of tools when at work, and is held responsible for their condition. These tools are those which are in common use among carpenters, such as hammer, cross-cut and panel saws, square, mallet, chisels, gauge, planes, and dividers, and must be kept in order by the student using them. Thus, each student is taught in the beginning of his work not only the use of the tools, but also the importance of keeping them in good order, and in their proper places. The work in this department begins with the simplest exercises, which consist mainly in making those joints which are in common use. Each of these exercises depends more or less on those preceding it, and becomes more and more difficult as it nears the end, thus carrying the student from "squaring" a piece of wood to the construction of a small bridge truss. The work is carried on from drawings, similar to those found in any of our shops, and thus the student learns not only to read mechanical drawings, but to construct the article wanted with only such drawings for a guide.

Having finished the woodwork, and acquired a knowledge of edged tools, the student is transferred to the Blacksmith Shop. Here he finds the same ideas of responsibility and good order. There are thirteen forges, supplied with a blast from a power blower, which is run by an engine built and set up by the graduating class of 1888. Here, as in the Carpenter Shop, the first exercises are very simple, becoming more and more difficult as they proceed, until, at the end, the student has made welds of different kinds, a chain with a hook and swivel, and has forged out and tempered several tools, such as engine lathe tools and cold chisels. After this, a move is made into the Machine Shop, where are found sixteen wood-turning lathes. On these he receives instruction in both



Guard Mounting.

inside and outside turning, everything being made according to drawings furnished from the tool room. Then follows instruction in the use of iron-working machinery, for which there is the following equipment: Six engine lathes, planer, drill, shaper, and milling machine. With these machine tools are taught the principles of cutting and shaping wrought and cast iron, steel and brass. Throughout the course the student receives systematic instruction, and the work is so graded as to bring into use as far as possible those principles which have been taught him in the class room. The instruction throughout the course is made as practical as possible, and at the same time is of such a nature as to call for intelligent thought in connection with the manual labor. Special attention is called to the fact that all work is made, as far as possible, from drawings similar to those which the student will be called upon to use in any of our first-class machine shops, thus compelling him to think for himself, and avoid becoming a mere automaton. All tools are furnished by the College, with the exception of a two-foot rule.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

PROFESSOR BARTLETT.

The instruction in this department is in conformity with the act of Congress, which, in endowing this and similar institutions, stipulates that military tactics shall be taught.

An officer of the regular army is detailed, by direction of the President of the United States, to carry out this requirement of the act in question, and the necessary arms, accoutrements, and ammunition, are furnished by the general government without cost to the College.

During the fall and spring terms, practical military instruction is given in infantry and artillery drills, rifle firing, and the duties of guards and sentinels. During the winter term, all military exercises are suspended except the necessary guard. A course of lectures is delivered to the first class, embracing the duties of guards and sentinels, military signaling and engineering, military law, the preparation of the usual returns and reports pertaining to a company, the organization and administration of the United States Army, and the elements of the art and science of war.

During this term, the second class receives instruction in the section room in infantry tactics.

While the instruction in this department is as thorough as practicable in the limited time allowed, in liberal compliance with the requirements of the act of Congress endowing the College, it is not proposed to graduate soldiers. Practical military exercises are held at such hours as not to conflict with academic duties of students. The physical training of such exercises has the effect of straightening and strengthening the students, giving them an erect carriage and graceful bearing.

The military system is the means of enforcing discipline and securing regularity in the performance of academic duties, and tends to inculcate in the students that habit of truthfulness and manliness of character which characterizes young men as gentlemen.

DEPARTMENT OF VETERINARY SCIENCE.

PROFESSOR FRANCIS.

The design of the course in Veterinary Science is two-fold. First, to acquaint the agricultural student with the diseases of our domestic animals; and second, to train their minds in sound and systematic methods of reasoning from cause to effect. To accomplish this, the instruction begins with the study of comparative physiology. This is presented by lectures, recitations, and demonstrations on the living subject. Comparative anatomy is treated in a similar manner. The horse is taken as the type, and dissections are made during the winter months.

This is presented in such a manner as not only to acquaint the student with the structure of the horse, but to teach him *how* to study organic bodies. Veterinary medicine and surgery are presented by systematic lectures on the diseases of animals, and their treatment.

Materia Medica and Therapeutics are given considerable attention.

These lectures are illustrated by a discussion of the drugs used by the Veterinarian, and the methods of compounding and administering the same. Laboratory work consists in studying the microscopic structure of the tissues, the methods of hardening, sectioning, staining, and mounting. Each student is provided with a first-class microscope, ranging from 50 to 400 diameters, and all necessary requisites for prosecuting the work. The department is equipped with Azoux's model of the horse, complete, and several special pieces of the same material. We have, also, the skeleton of man, horse, pig, goat, and various other animals, mounted. There are also a considerable number of skulls and other bones, both healthy and diseased. There is also quite a collection of parasites, tumors, monstrosities, dissected preparations, and surgical instruments belonging to the department. The library of the department is quite respectable, and contains all the standard works in English, and some in other languages. The total value of the equipment is about $3000.

Veterinary Laboratory.

GENERAL INFORMATION.

LOCATION.

The College is situated at College Station, in the county of Brazos, five miles south of Bryan, and ninety-five miles northwest of Houston. The Houston and Texas Central Railroad runs through the grounds, daily trains stopping at the Station, about 800 yards from the main building. Students and visitors are advised to take trains arriving here in the daytime.

POSTOFFICE.

This is College Station, not Bryan. It is important that correspondents should observe this, since letters are often delayed by going to the latter place. College Station is a money order office.

MAIN BUILDING.

The main building stands on the highest point of the grounds. It is four stories high, made of brick, with mansard roof and towers. The rooms are all of high pitch, and well ventilated. There are forty-five rooms in the building. On the fourth story nearly half the space is occupied by the large room assigned to the drawing department. Two society halls, the armory, and one small room are also on this floor. On the third floor are the section rooms of the departments of English, languages, and horticulture and botany, the library and reading room, and eight rooms occupied by officers of the College. On the second floor are the President's office, the business office, the book store, the chemical laboratory and section room, the museum, the agricultural section room, English section room, the office of the Director of the Agricultural Experiment Station, and the janitor's room. On the first floor are chemical private laboratory, furnace room, section room, and instrument room of the department of civil engineering and physics, store room, dark room, mathematical section room, guard room, commandant's office, and section room and laboratory of the department of veterinary science. There are broad halls running through each story at right angles to each other, and two sets of stairways, one in the middle, the other at the end of the building.

SHOPS.

North of the main building are found those buildings occupied by the department of mechanical engineering, which consists practically of one building, although made in two distinct parts. First, the one containing the carpenter shop, class rooms and model room; second, that containing the machine and blacksmith shops and the boiler room. The carpenter shop is fitted up with benches and tools for the accommodation of sixty pupils, while above it, on the second floor, are two class rooms and a model and designing room. Back of this are the other shops mentioned, in a building of one story. Power for the machine shop is furnished by an eighteen horse power Straight Line Engine, and that for the blacksmith shop by a five horse power engine, which was built and set up by the graduating class of 1888. The machine shop is equipped with sixteen wood turning lathes, circular, band, and jig saws, emory wheel stand, six engine lathes, planer, shaper, drill, and milling machine. The blacksmith shop has thirteen forges, with necessary tools, power blast, and exhaust fan.

GATHRIGHT HALL.

This building, erected in 1876 for a mess hall, is now used for barracks and other purposes. It will accommodate thirty-six students. It is named in honor of Thomas L. Gathright, the first President of the College.

PFEUFFER HALL.

This building, erected in 1887, is for a dormitory, and has capacity to accommodate seventy-five students. It is named in honor of Hon. George Pfeuffer, a former President of the Board of Directors.

AUSTIN HALL.

This is a dormitory, erected in 1888, and has capacity to accommodate seventy-five students. It is named in honor of Stephen F. Austin.

ROSS HALL.

This is another and more commodious dormitory, three stories high, with forty-one rooms, erected in 1892, and has accommodations for eighty-two students. It is named in honor of the late President L. S. Ross.

ASSEMBLY HALL.

This is a two-story brick building, having a main floor and a gallery. In it are held the public exercises of the College, and examinations for large classes.

MESS HALL.

This building was erected in 1897. Its dining hall has capacity for over five hundred students.

INFIRMARY.

A large and comfortable building has been erected as an infirmary and surgeon's residence.

The surgeon will give his attention to all students without charge other than the regular medical fee of five dollars, paid by each student upon entrance.

NATATORIUM.

The natatorium, erected in 1894, comprises a system of bath rooms and a swimming pool twenty-five by fifty feet and of varying depth, supplied by deep well with pure white sulphur water. In winter, the water for the bath rooms is heated to any desired degree by appliances for the purpose in the building.

CREAMERY.

The creamery has been in successful operation since 1888. It is in a substantial building, supplied with a complete outfit of the latest improved apparatus for making butter. The machinery is driven by a six-horse power steam engine, and by a four-horse power gasoline engine. Practice in both butter and cheese making forms part of the agricultural course.

FARM BUILDINGS.

These are situated several hundred yards in the rear of the main building. They consist of two large barns, a milking shed, and a piggery. One of the barns is new, and is fitted with stalls for the thoroughbred cattle, and the storage rooms for implements and food.

There are connected with one of the barns four large silos owned by the Agricultural Experiment Station, and students will have the advantage of practical instruction in the construction of silos and the best methods of preparing ensilage.

OTHER IMPROVEMENTS.

Other improvements comprise a laundry, with full capacity to meet the demands of the College; an ice plant with a daily capacity of three tons; a complete system of water works which furnishes ample water for irrigation and fire protection; an electric light plant, of full capacity for lighting grounds and buildings and affording power for electric fans for the Mess Hall; a fire-proof artillery shed. for protection of two three-inch breech-loading rifled cannon, manufactured by the United States government for the College.

PERMANENT FUND.

In November, 1871, the Legislature formally accepted from Congress the gift of one hundred and eighty thousand acres of public land for the endowment of an agricultural and mechanical college. This land was sold for $174,000, which sum was invested in 7 per cent State bonds. As under the act of Congress neither the principal nor interest of this money could be used for other purposes than the payment of officers' salaries, at the time of the opening of the College there was an addition to the fund from accumulated interest of $35,000. This was invested in 6 per cent bonds of the State, thus furnishing an annual income of $14,280.

LANDS.

The county of Brazos donated to the College two thousand four hundred and sixteen acres of land lying on each side of the Houston and Texas Central Railroad, five miles from Bryan and ninety-five from Houston.

GROUNDS, FARM, AND GARDEN.

The garden, orchard, barn yards, and campus are included in the enclosure to the east of the Station. The campus, which consists of some twenty-five acres of lawn, shrubbery, and flowers, surrounds the College buildings. Roses bloom in great profusion and variety on the campus nearly every month in the year.

The orchard, vineyard, nursery, and garden are located north and east of main College building. About fifty acres are devoted to this work. The object of this work is two-fold. First, to test the numerous varieties and methods as adapted to this soil and climate; second, to give object lessons to students, and thus serve to illustrate the lecture room work in teaching. The peach orchard of 187 varieties is now in full bearing. The new vineyard of 205 varieties and the blackberry and dewberry garden of 25 varieties are bearing their first fruits. In the nursery the students are taught various methods of propagating different fruits. Peach and pear trees, which the students propagate by budding and grafting, are being set each year in permanent orchards, northwest of main building.

The farm comprises about 250 acres, not including pasture lands owned by the College. This is kept in a high state of cultivation by use of the most improved machinery, crop rotation, and irrigation. On the west side of the railroad two pastures of 800 acres each are under fence. The College owns herds of registered cattle, consisting of Holsteins, Galloways, and Jerseys, besides a number of high grade cows, which supply the College with milk and butter. The swine include many pure bred Essex of the best quality.

LIBRARY AND READING ROOM.

A valuable library and reading room have been provided for the use of the students. The library now comprises standard works of history, biography, agriculture, mechanics, engineering, mathematics, natural science, political economy, mental and moral philosophy, poetry, general literature, and reference.

Gifts of books and magazines will be thankfully received. Back numbers of literary and scientific periodicals will be especially useful in completing files.

LIST OF PERIODICALS AND PAPERS.

The following papers have been contributed to the library by the publishers, excepting those marked with an (*), which have been subscribed for:

Agriculture.

*American Gardening, New York.
Bulletin Séances de la Societe de l'Agriculture, Paris.
Bulletin Ministère de l'Agriculture, Paris.
*Country Gentleman.
Farm and Fireside, Springfield, Ohio.
Farm and Home, Springfield, Mass.
Farm, Field and Fireside, Chicago, Ill.
Farming, Toronto, Canada.

Farmer's Call, Quincy, Ill.
Farm Journal, Philadelphia.
Farmer's Review, Chicago, Ill.
Farmer's Voice, Chicago, Ill.
Kansas Farmer, Topeka, Kans.
Massachusetts Ploughman, Boston, Mass.
Mirror and Farmer, Manchester, N. H.
Metropolitan and Rural Home, New York.
Our Grange Homes, Boston, Mass.
*Rural New Yorker.
*Southern Cultivator, Atlanta, Ga.
Southern Planter, Richmond, Va.
Texas Farm and Ranch, Dallas, Texas.
Wisconsin Agriculturist, Racine, Wis.

Stock.

American Sheep Breeder, Chicago, Ill.
*Breeder's Gazette, Chicago, Ill.
Texas Stockman and Farmer, San Antonio, Texas.

Lumber.

Southern Industrial and Lumber Review, Austin, Texas.

Dairy.

Hoard's Dairyman.
Jersey Bulletin, Indianapolis, Ind.

Mechanical.

*Architecture and Building, New York.
*American Machinist, New York.
*Dixie, Atlanta, Ga.
*Power, New York.
*Railroad Gazette, New York.

Scientific.

*Botanical Gazette, Chicago, Ill.
Drainage Journal, Indianapolis, Ind.
*Electrical World, New York.
*Engineering News, New York.
*Engineering Magazine, New York.
*Engineering and Mining Journal, New York.
*Nature, London, Eng.
*Popular Science Monthly, Boston, Mass.
*Scientific American and Supplement, New York.

Military.

*Journal of the Military Service Institute, New York.

Literary.

*Century, New York.
*Cosmopolitan, New York.
*Fortnightly Review, London.
*Forum, New York.
*Germania, Boston, Mass.
*Harper's Monthly, New York.
Industrialist, Manhattan, Kans.
*Le Francois, New York.
*Literary Digest, New York.
*Littell's Living Age, Boston, Mass.
*Nation, New York.
*North American Review, New York.
*Scribner's Magazine, New York.

Religious.

Christian Observer, Louisville, Ky.
Southwestern Presbyterian, New Orleans.
Texas Baptist and Herald, Dallas, Texas.
Western Recorder, Louisville, Ky.

Juvenile.

*St. Nicholas, Boston, Mass.
*Youth's Companion, Boston, Mass.

Illustrated.

*Harper's Weekly, New York.
*Puck, New York.
*Ueber Land und Meer, Berlin, Germany.

General News.

Bellville Wochenblatt, Bellville.
Brazos Pilot, Bryan.
Brazos Blade, Bryan.
Bryan Evening Pilot, Bryan.
Daily Bryan Eagle, Bryan.
*Dallas News, Dallas.
Denison Herald, Denison.
Eagle Pass Guide, Eagle Pass.
*El Heraldo, San Antonio.
Floresville Chronicle, Floresville.
Franklin Herald, Mount Vernon.
Freie Presse fur Texas, San Antonio.
Georgetown Signal, Georgetown.
*Houston Post, Houston.
Jacksboro Gazette, Jacksboro.
La Grange Journal, La Grange.
*L'Abeille, New Orleans, La.

Mason County News, Mason.
Midland Gazette, Midland.
Navasota Weekly Review, Navasota.
*New York World (Weekly), New York City.
Nord Texas Presse, Dallas.
Palestine Semi-Weekly, Palestine.
*Picayune (Weekly), New Orleans.
Seguin Enterprise, Seguin.
Semi-Weekly Times, Palestine.
Standard-Herald, Rusk.
Sunday Gazette, Denison.
Uvalde News, Uvalde.
Van Alstyne News, Van Alstyne.
Victoria Review, Victoria.
Vorwarts, Austin.

MUSEUM.

A room in the main building has been fitted up for a museum. The closets and show cases are well furnished with specimens of many varieties.

LITERARY SOCIETIES.

There are two literary societies at the College—the Austin and the Calliopean. They meet weekly in their respective halls for practice in debate, literary composition, and declamation. Public debates are held frequently during the session, and speakers are invited to deliver addresses.

RELIGIOUS AND MORAL CULTURE.

Every Sunday there will be service in the chapel. The faculty will try by all means within their power to protect and develop good morals in those committed to their charge.

The situation of the College is peculiarly favorable for the preservation of the morals of the students. The nearest town is distant five miles, and it is almost impossible for any student to go to Bryan, even for a short time, without his absence becoming known to the authorities. The temptations that beset young men in cities are entirely absent here.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This organization, purely voluntary with the students, has exerted so quiet, yet steady and helpful, an influence upon the morals of the corps that it deserves notice as a recognized part of the College work. Numbering from thirty to fifty young men, it forms a nucleus around which the better elements gather, and a restraint which is felt more or less by any who are ill-disposed.

HYGIENE.

The buildings of the College stand upon the crest of a "divide," from which there is sufficient slope to carry off all drainage.

The soil is sandy, and mud and water disappear within a few hours after rain. An extensive open prairie surrounds the College on all sides. There is a constant breeze—usually very strong. The water used by students is obtained from cisterns, supplied from high, clean roofs.

The rooms of the students are inspected at least twice a day, and are required to be kept neat and well ventilated.

There is in the vicinity of the College apparently nothing to produce malarial sickness, and as a matter of fact there is very little of it here. All serious sickness has been in the form of pneumonia and measles, which do not depend on local causes.

The food served in the Mess Hall is abundant, palatable, and wholesome. It is therefore very desirable that parents should refrain from sending boxes of delicacies to their sons. The practice of eating from these between meals is undoubtedly very injurious to the health of the young men, and the surgeon has traced more sickness and consequent loss of time to this one cause than to any other.

The drill, farm and shop practice, and athletic sports furnish abundant and wholesome exercise for the students.

TO PARENTS AND GUARDIANS.

The necessity for uninterrupted attention to their studies on the part of students can not be too strongly urged. It is impossible for a young man to become interested in his work here if he is permitted to leave the College whenever any special amusement is advertised in our neighboring towns and cities. It is therefore respectfully asked that those who send their sons or wards here do not, except in the most pressing emergencies, request permission for them to leave their studies.

Whenever the parent or guardian shall leave the application for special permits to the discretion of the son or ward, the College authorities will judge of the propriety of granting such permits.

A SPECIAL WARNING IN REGARD TO THE CHRISTMAS HOLIDAYS.

No student will be allowed to anticipate the date of the holidays and leave the College at the time when his examinations are pending. The evil consequences are not confined to the individual student, for his classmates and friends are so disturbed in their minds by the feeling of homesickness that almost invariably results, as to be unable to acquit themselves creditably. A parent or guardian sometimes writes for his son or ward to come home in this manner, and afterwards complains because the student is not promoted to the higher class, when such failure is often due to the loss of time caused by this absence from the regular duties.

Attention is called to the following rule:

"Except in urgent cases, leaves of absence shall not be granted within two weeks of the close of the session nor within two weeks of the Christmas holidays."

MILITARY ORGANIZATION AND DISCIPLINE.

For the purpose of maintaining good order and discipline, as well as for the proper execution of the law of Congress requiring military instruction of the students, they are organized into a battalion of four companies and staff. The battalion is under the immediate command of the Commandant. The officers, commissioned and non-commissioned, are students taken for the most part from the first and second classes. They are appointed by the President of the College upon the recommendation of the Commandant, and their appointment and rank are made to depend upon the active and soldierly performance of their duties, their sense of duty and responsibility, and their general good conduct and class standing.

The President, by College regulations, is responsible for the government and management of the College, and supervises and controls all the departments, collegiate and otherwise.

The Commandant has immediate command of the corps of students, and is responsible for the military organization. All permits for privileges, all excuses and explanations for delinquencies must be submitted through him.

GENERAL REGULATIONS.

It is understood that every student upon entering the College pledges himself to an honest effort to observe the regulations and sustain the authorities in the maintenance of discipline.

The strictest attention to study, and the most exact punctuality in attendance on recitations and other duties, will be made the condition of every student's continuance at the College, and any student who without authority absents himself from recitations or any other duty, deserts his class, or refuses to attend when warned, shall be dismissed, or less severely punished, at the discretion of the Faculty.

Students are forbidden to enter into combinations under any pretext whatever. One who shall begin, excite, cause or join in any boisterous or riotous conduct, or become a party to any agreement to avoid or violate any regulation, to hold no intercourse with a comrade, or to do any act to the prejudice of good order and military discipline, shall be dismissed.

If any student shall be guilty of hazing, or of inciting others thereto, he shall be expelled, and it shall be the duty of the President to place opposite his name in the Catalogue the words, "expelled for hazing."

Students are prohibited, under the penalty of dismissal, from having in their possession ammunition, weapons, or arms not issued for the performance of military duty; nor shall these be retained loaded in quarters under any pretext.

A student who shall drink, or bring, or cause to be brought within the cadets' limits, or have in his room, or otherwise in his possession, any fermented or intoxicating liquor, or fruits or viands preserved in intoxicating liquor, shall be dismissed or otherwise punished, at the discretion of the Faculty.

No student shall have in his possession or play at cards or games of chance, engage in a raffle, or in any manner wager money or other things, on penalty of dismissal.

Permission to attend private parties or places of public amusement will not be granted during the term.

No cadet can be granted a leave of absence during a term without an urgent necessity.

No student is allowed to leave the College during the session without permission of the President of the College, on application through the Commandant.

A student who shall cut, mark, or otherwise injure or deface the buildings, furniture, or appurtenances, the trees, shrubbery, greensward, grounds, fences, stables, or outhouses, or who shall lose, injure, destroy, or improperly dispose of the arms, accoutrements, or other property of the College, shall make good all damage, and be dismissed or otherwise punished according to the nature of the offense.

When the responsibility for the destruction of State property can not be fixed upon any one, the amount of the damage will be assessed against the occupants of a room or division of the entire body of students, as the case may require.

Students receive the admonition and counsel of the President before being subjected to any penalty, except in the case of flagrant offenses. Those who are habitually neglectful of their duties, or who do not regularly attend their classes, will be required to withdraw from the College.

To each recorded delinquency a number of from one to ten, proportional to the degree of the offense, in a moral and military view, is assigned to express demerit.

Any student receiving demerits as follows shall be declared deficient in conduct and subject to dismissal: In the First class: in the fall term 40, winter term 30, spring term 30, in the year 100; in the Second class: in the fall term 60, winter term 50, spring term 40, in the year 150; in the Third class: in the fall term 80, winter term 60, spring term 60, in the year 200; in the Fourth class: in the fall term 100, winter term 75, spring term 75, in the year 250.

DEGREES AND HONORS.

Conferred at Commencement, June, 1897.

DEGREE OF B. S. (in Agriculture),

B. F. Bryan, G. P. Caven, O. J. Knolle, A. J. Kyle.

DEGREE OF B. S. (in Civil Engineering),

A. B. Carson, S. L. Cohn, H. Cotton, H. M. Eldridge, W. Faust, F. D. Hudgins, W. F. Hutchinson, John Mead, E. M. Moursund, E. M. Overshiner, E. H. Sternenberg, H. H. Ueckert, N. Wheat, L. D. Williams.

DEGREE OF B. S. (in Horticulture),

C. C. Todd.

DEGREE OF B. S. (in Mechanical Engineering),

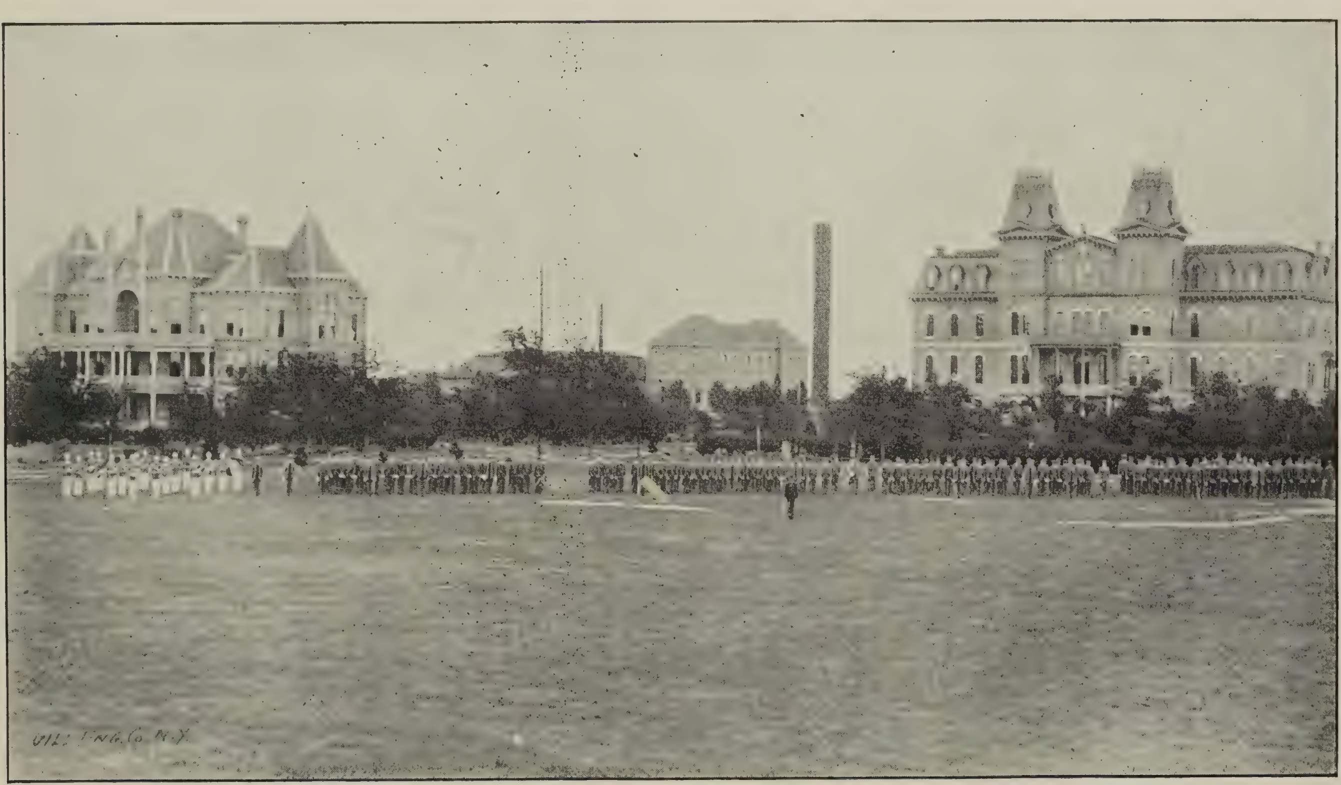
C. M. Buhler, Horace Cavitt, E. Couch, H. M. Rollins, F. Shires, G. Shires, F. Vinther.

HONOR GRADUATES—SESSION 1896-97.

Todd, Bryan, Rollins.

DISTINGUISHED STUDENTS BY CLASSES.

First Class—Knolle, Bryan, Wheat.
Second Class—Robson, Newton, Martin.
Third Calss—Campbell, Martin, E., Kuhl.
Fourth Class—Rothe, Abrahams, Taylor.



Battalion Review.

DISTINGUISHED STUDENTS BY DEPARTMENTS.

FIRST CLASS.

Agriculture—Bryan, Caven, Knolle.

Chemistry—Agricultural and Horticultural Courses, Todd, Bryan; Civil Engineering and Mechanical Engineering Courses, Hutchinson, Overshiner.

Civil Engineering and Physics—Wheat, Overshiner, Mead.

Drawing—Mechanical Engineering Course, Rollins, Couch; Civil Engineering Course, Wheat, Ueckert.

English and History—Todd, Rollins, Hutchinson.

Horticulture and Botany—Todd.

Languages—Latin, Bryan; German, Wheat; French, Overshiner; Spanish, Overshiner.

Mathematics—Mead, Wheat, Overshiner.

Mechanical Engineering—Vinther, Rollins, Couch.

SECOND CLASS.

Agriculture—Newton, Kerr, Glover.

Chemistry—Agricultural and Horticultural Courses, Robson, Crow; Civil Engineering and Mechanical Engineering Courses, Donalson, Smith.

Civil Engineering and Physics—Civil Engineering Course, Bretschneider, Smith; Agricultural, Horticultural and Mechanical Engineering Courses, Rawlins, Robson.

Drawing—Mechanical Engineering Course, Foutrel, Barclay; Civil Engineering Course, Smith, Bretschneider.

English and History—Robson, Kerr, Harrison.

Horticulture and Botany—Crow, Robson, Martin.

Mathematics—Kerr, Robson, Donalson.

Mechanical Engineering—Rawlins, Foutrel, Donalson.

Military Science—Newton, Bretschneider, Robson.

Veterinary Science—Martin, Harrison, Glover.

THIRD CLASS.

Agriculture—Miller, Cook, Barnes, S.

Civil Engineering and Physics—Civil Engineering Course, Martin, Bowen; Agricultural, Horticultural and Mechanical Engineering Courses, Campbell, Whisenant.

Drawing—Agricultural Course, Miller, Barnes, S.; Mechanical Engineering Course, Campbell, Evans.

English and History—Martin, Savage, Johnson.

Mathematics—Adams, Martin, Whisenant.

Mechanical Engineering—Civil Engineering Course, Bowen, Kuhl; Mechanical Engineering Course, Campbell, Brewer.

Veterinary Science—Whisenant, Harrison.

FOURTH CLASS.

Drawing—Drawing, Faust, Thomas, E.; Bookkeeping, Roeder, Toberman.

English and History—Abrahams, Taylor, Fitzgerald.

Mathematics—Bittle and Rothe, Blohm.

Mechanical Engineering—Garbade, Rothe, McNeill, Willis.

BATTALION ORGANIZATION.

G. T. BARTLETT, First Lieutenant, Third U. S. Artillery, Commandant.

Commissioned Staff
- T. L. Smith, First Lieutenant and Adjutant.
- C. G. Robson, First Lieutenant and Quartermaster.
- J. G. Kerr, First Lieutenant and Private Secretary.

Non-Commissioned Staff
- E. J. Kyle, Sergeant Major.
- S. E. Barnes, Quartermaster Sergeant.

CAPTAINS.

Co. A.	*Co. B.*	*Co. C.*	*Co. D.*
G. Newton, 1.	R. M. Barnes, 3.	H. E. Rawlins, 4.	W. C. Martin, 2.
		FIRST LIEUTENANTS.	
W. A. Scherer, 1.	W. Bretschneider, 3.	W. E. Crow, 4.	G. L. Sneed, 2.
		SECOND LIEUTENANTS.	
R. L. Barclay, 3.	T. D. Rountree, 1.	H. T. Abbott, 5.	W. T. Carter, 2.
F. J. Greenwood, 6.		G. F. Foutrel, 7.	W. F. H. Glover, 4.
		FIRST SERGEANTS.	
C. K. Bowen, 1.	R. J. Poulter, 3.	E. L. Martin, 4.	A. M. Sloss, 2.
		SERGEANTS.	
J. G. Dance, 1.	L. L. Ball, 3.	R. W. Campbell, 2.	C. C. Rose, 8.
C. L. Johnson, 4.	E. Kuhl, 5.	M. Lewis, 12.	H. A. Brewer, 9.
J. Ehrhart, 10.	W. H. Whisenant, 6.	E. H. Astin, 13.	T. L. Horn, 11.
A. C. Love, 16.	C. D. Evans, 7.	C. C. Anglin, 14.	R. W. Cousins, 15.
		CORPORALS.	
O. W. Myers, 1.	A. J. Adams, 3.	J. Lewis, 7.	J. E. Couch, 4.
E. T. Walling, 2.	S. McCormick, 6.	L. Fitzgerald, 12.	J. E. Abrahams, 8.
J. W. Roark, 5.	B. G. Roeder, 9.	A. Winkler, 15.	A. C. Williams, 11.
W. W. Leggett, 10.	S. Simpson, 14.	W. I. Bryan, 16.	M. Jackman, 18.
C. Baumgarten, 13.		W. M. Walden, 17.	T. D. Beall, 19.

BAND.

F. H. Miller, Director
H. H. Tracy, Second Lieutenant.
J. S. Monroe, Sergeant.
D. J. Garbade, Corporal.

R. S. Farr, Drum Major.
W. A. Harrison, Second Lieutenant.
C. T. Charlesworth, Sergeant.
E. E. Thomas, Corporal.

PRIVATES.

T. C. Bittle.
R. Eberspacher.
J. N. Ferguson.
T. Clement.
C. E. Strain.
W. K. Saunders.
W. F. Dyer.
W. A. Blackwell.
M. S. Kahn.

COMMENCEMENT EXERCISES.

June 6, 7 and 8, 1897.

PROGRAMME.

Sunday, June 6.

9 a. m.—Inspection of Cadet Quarters by College Officers and Visitors.

11 a. m.—Commencement Sermon, by Bev. J. B. Moody, of San Antonio.

8:30 p. m.—Address before the College Young Men's Christian Association, by Rev. M. M. Davis, of Dallas.

Monday, June 7.

9 to 11 a. m.—Inspection of Departments, including exhibition of Live Stock, Farm Machinery, Apparatus and Appliances for Instruction; Display of Products of Students' Work; Students at Work in Shops.

11:30 a. m.—Joint Celebration of the Literary Societies.

2 p. m.—Executive Meeting of the Alumni Association.

5:15 p. m.—Review of the Battalion by the Governor of the State, followed by Infantry Drill.

8:30 p. m.—Public Meeting of the Alumni Association.

Tuesday, June 8—Commencement Day.

10 a. m.—Prayer.

Commencement Address by Hon. L. T. Dashiell, Speaker of the House of Representatives.

Reading of Thesis by First Honor Graduate.

Delivery of Medals.

Valedictory Address: C. C. Todd, Jefferson. (Elected by the First Class.)

Response to the Valedictory: T. O. Durham. (Elected by the Second Class.)

Conferring Degrees by the President of the Board.

Announcement of those Distinguished in the several Classes and Departments.

Benediction.

5 p. m.—Sham Battle.

5:30 p. m.—Drill by Ross Volunteers.

6:15 p. m.—Graduation Dress Parade.

GRADUATING CLASS.

With Subjects of Their Theses.

AGRICULTURAL COURSE.

B. F. Bryan	Dairy Management.
G. P. Caven	Corn.
O. J. Knolle	The Nerves of the Eye.
A. J. Kyle	

CIVIL ENGINEERING COURSE.

A. B. Carson	Foundations.
Sam L. Cohn John Mead	Declination of the Magnetic Needle at College Station, Texas.
H. Cotton F. D. Hudgins	Projection of the S. P. & B. Railway.
H. M. Eldridge W. F. Hutchinson	Timber Tests and Wood Preservatives.
W. Faust.	Sewerage and Sewage Disposal.
E. M. Moursund L. D. Williams	Improvement of Campus Roads.
E. M. Overshiner.	Impounding Reservoirs for Irrigation Purposes at College Station.
E. H. Sternenberg H. H. Ueckert	Cements, with Comparative Tests.
N. Wheat	The Design of a Court House.

HORTICULTURAL COURSE.

C. C. Todd	The Maintenance of Orchard Soil Fertility.

MECHANICAL ENGINEERING COURSE.

C. M. Buhler H. M. Rollins	Plan for Remodeling Power Plant at A. & M. College.
W. H. Cavitt	Transmission of Power by Wire Ropes.
E. Couch	Design of a Steam Engine.
F. Shires	The Indicator.
G. Shires	The Improvement of Rail Road Air Brakes.
F. Vinther	The Transmission of Power by Belts and Ropes.

Battalion Inspection.

ALUMNI.

ALUMNI ASSOCIATION.

Organization for 1897–98.

F. R. Ross, '94	President	Waco.
T. A. Fuller, '79	Vice President	Austin.
M. D. Tilson, '86	Vice President	Texarkana.
J. W. Hawkins, '93	Vice President	Austin.
E. W. Kerr, '96	Vice President	College Station.
P. S. Tilson, '88	Secretary and Treasurer	College Station.
J. S. Radford, '90	Member Ex. Committee	Houston.
W. B. Philpott, '84	Alumni Editor Battalion	College Station.

EXECUTIVE COMMITTEE.

F. R. Ross, '94.
J. S. Radford, '90.
P. S. Tilson, '88.

On the following pages are given the names of all graduates of the College, with the courses of study pursued and the degrees obtained; their occupations and residences are also given as far as known. The alumni are requested to aid the President in making the roll as accurate as possible.

From the opening of the College in 1876 to its reorganization in 1880, the studies were elective, and led to appropriate degrees. In 1880 two graduates received the degree of Civil Engineer.

From 1881 to 1887, there were two prescribed courses, the Agricultural and the Mechanical, but no degrees were given.

From 1888 to 1895 there were four prescribed courses, leading to the degrees of Bachelor of Scientific Agriculture (B. S. A.); Bachelor of Civil Engineering (B. C. E.); Bachelor of Scientific Horticulture (B. S. H.); Bachelor of Mechanical Engineering (B. M. E.).

Since 1895 the four prescribed courses have remained the same, but the degree in each has been Bachelor of Science (B. S.), the particular course being specified in the diploma.

Names of deceased alumni are marked (*).

Abbreviations—A. Agricultural Course, L. Latin, Gr. Greek, G. German, F. French, S. Spanish, Philos. Philosophy, E. English, M. Mechanical Course, Math. Mathematics, C. Chemistry, P. Physics.

1878.

Name.	Subjects.	Occupation.	Residence.
W. A. F. Treckman	G. '78; F., S., Philos., E., C., P., '79.	Editor	Bellville.
R. A. Rogers	L., G., '78; L., Gr., G., E., Philos., '79.	Lawyer	

1879.

Name.	Subjects.	Occupation.	Residence.
A. Cunningham	L., Gr., G., Math., C., P.	Route agent D. & F. W. Ry.	Fort Worth.
P. L. Downs	L., Gr., G.	Bank cashier	Temple.
F. W. Fort	L., Gr., G.	Bank cashier	Waco.
J. R. Downs	L., G.	Lawyer	Waco.
*D. M. Jack	L., G., Philos., E.		
E. Y. Mullins	L., G.	Minister	Newton Center, [Mass.
W. M. Sleeper	L., Gr., G., Math.	Judge	Waco.
A. L. Banks, B. S. '92, M. S. '94.	G.	Adjunct Prof. Math.	College Station.
W. H. Brown	G.	Lawyer	Navasota.
M. L. Chambers	G.	Cashier	Fort Worth.
T. A. Fuller	G.	Asst. Atty. Gen.	Austin.
F. A. Reichardt	G.	Merchant	Houston.
Chas. Rogan	G., E., C., P.	Lawyer	Brownwood.
H. G. Smythe	G.	Physician	Bryan.
K. M. Van Zandt	G.		City of Mexico.
J. J. Baker	F., S., Philos., E.	Commercial traveler	Shreveport, La.
E. G. Cochran	F., Philos., E.	Physician	Greenville.
T. H. Brown	S.	County clerk	Waco.
D. Campbell	S.		Saunderson.
J. H. Haden	S.		Blooming Grove.
M. Black	Philos., E.	Minister	Sylvania, Ark.
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1880.

Name.	Subjects or degree.	Occupation.	Residence.
C. S. Miller	E., L.	Real estate agent	Ballinger.
F. F. Bledsoe	E., Gr	Teacher	
D. E. Alexander	E., L., M.		
*T. E. Blakemore	E., M.		
L. J. Kopke	Civil Eng.	Chief Eng. G. B. & K. C. Ry.	Beaumont.
W. H. Brown	Civil Eng.	Lawyer	Navasota.
E. E. Fitzhugh	E., L., Math	Insurance	Waco.
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1881.

Name.	Course.	Occupation.	Residence.
*G. H. Dugan			
31			

1882.

Name.	Course.	Occupation.	Residence.
M. F. Armstrong	M	Lumber manufacturer	Chappel Hill.
Searcy Baker	M	Merchant	Navasota.
J. M. Burford	M	Physician	Independence.
*F. R. von Biberstein	M		
J. R. Cravens	M	State Agt. and Adjuster Am. Central Ins. Co.	Dallas.
C. S. Graves	M	Chief Clk. Aud. Dept. Mex. Intern. Ry.	C.P.Diaz, Mexico.
S. A. Hare	M	District Attorney	Sherman.
R. S. Lipscomb	M	Physician	Grapevine.
David Rice	M	Lumber manufacturer	Houston.
Robert Sawyer	M	Lumber dealer	Clarendon.
Aaron Talbert	M	Farmer	Calvert.
D. H. Watson	M	Horticulturist	Brenham.
43			

1883.

Name.	Course.	Occupation.	Residence.
*J. C. Caldwell	M		
J. F. Edwards	M	Merchant	
Osborne Kennedy	M	Lawyer	Dallas.
H. J. Miller	M	Merchant	Bellville.
*W. E. Mosely	M		
A. T. Patrick	M	Lawyer	New York.
W. L. Tuller	M	Real estate agent	
*J. M. Wesson	M		
51			

1884.

Name.	Course.	Occupation.	Residence.
G. W. Roach	M	Teacher	El Paso.
W. Wipprecht, B.S.A.'85	A		Bryan.
J. L. Gray	M	Civil engineer	
T. B. McQueen	M	Bookkeeper	Marlin.
N. A. Dawson	M	Lawyer	Austin.
F. C. von Rosenberg	M	Lawyer	Austin
B. C. Makensen	M	Teacher	San Antonio.
A. L. Shirley	A	Railway agt., merchant.	Anna.
R. E. Pennington	A	Lawyer	Brenham.
G. Giesecke	M	Proprietor flour mills	San Antonio.
R. B. Green	M	District Judge	San Antonio.
W. B. Philpott, M. S. '95	M	Assoc. Prof. Eng. and His.	College Station.
B. E. Knolle	M	Physician	Industry.
V. Andrews	M	Physician	
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1885.

Name.	Course.	Occupation.	Residence.
J. N. Davis	M	Supt. city school	Hico.
F. L. Pfeuffer	M	Merchant	New Braunfels.
W. Whitaker	M	Lumber dealer	Texarkana.
T. D. Rowell	A	Lawyer	Jefferson.
F. Caruthers	A	Lawyer	Guthrie, Ok.
F. E. Dudley	M		
L. Makensen	M	Teacher	San Antonio.
C. H. Pescay	M	Special Ins. agt	Houston.
S. Hough	M	Lawyer	Rock Springs.
*E. W. Spann	M		
75			

1886.

Name.	Course.	Occupation.	Residence.
*D. Adriance, M. S. '90	A		
F. E. Giesecke, M. E. '90	M	Professor drawing	College Station.
M. D. Tilson	M	Mfr. and Merchant	Texarkana.
H. L. Wright	M	Manager Palestine W. & P. Co.	Palestine.
I. A. Cottingham	M	Div Eng., S. P. Ry	Del Rio.
E. H. Whitlock	M	Expert mechanical eng. with Natl. Carbon Co.	Cleveland, Ohio.
J. W. Carson	A	Farmer	Pitts Bridge.
C. L. Burchardt	M	Bank cashier	Karnes City.
J. M. Carson	A		Fort Worth.
W. F. Woodward	M	Stock raiser	Antelope.
C. C. McColloch, C. E. '90	M	Surgeon U. S. army	Hot Springs.
86			

1887.

Name.	Course.	Occupation.	Residence.
G. A. Rogers	M	Merchant	Longview.
J. H. Freeman	M	Proprietor livery stable.	Austin.
F. L. Fordtran	A	Physician	Flatonia.
H. J. McNair	M	Civil engineer	Houston.
T. B. West	M		Columbus.
L. E. Allen	M	Bookkeeper	Marlin.
E. R. Knolle	M	Physician	Wesley.
J. B. Hereford	M	Special insurance agent.	Dallas.
*H. C. Hare	M		
E. Gruene	M	Music Teacher	New Braunfels.
96			

1888.

Name.	Degree.	Occupation.	Residence.
W. H. Allen	B. S. A.	Physician	Marlin.
Paul Braun	B. M. E		San Antonio.
R. H. Dietert	B. M. E	Supt. Rep. Dept. H. & T. C. shops.	Houston.
F. C. Hoffman	B. M. E.	Watchmaker	New Braunfels.
H. F. Jonas	B. C. E.	Draughtsman S. P. Ry., B. & B. Div.	Houston.
N. L. Josey	B. S. A.	Bookkeeper	San Antonio.
A. P. Knolle		Physician	Ellinger.
W. H. Knolle	B. C. E.	Physician	New Orleans, La.
W. O. R. Pfeuffer.	B. S. A.	Physician	Rockdale.
F. Rennert	B. S. A.	Bookkeeper	San Antonio.
*Z. M. Shirley	B. M. E.		
E. J. Smith	B. S. A.	Lawyer	Denison.
W. W. Stewart	B. M. E.	Miller	Stewart's Mill.
M. S. Swain	B. S.		Austin.
P. S. Tilton, M. S. '94	B. S. A.	Assoc. Prof. Chemistry	College Station.
W. M. Wood	B. C. E.	Agent Williams Typewriter Co.	Washington, D. C.
W. A. Wurzbach	B. C. E.	Lawyer	San Antonio.
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1889.

Name.	Degree.	Occupation.	Residence.
L. D. Amsler	B. M. E.	Miller	Hempstead.
C. A. Buckman	B. C. E.	Engineer	Denison.
L. B. Burck	B. C. E	Commercial traveler	Galveston.
W. E. Drisdale	B. S	Physician	Flatonia.
J. D. Fearhake	B. C. E.	Lawyer	Galveston.
E. W. Hutchinson.	B. C. E.	Merchant	Houston.
*W. T. Jones	B. C. E.		
J. F. Kuehne	B. M. E.	Bank clerk	Austin.
W. W. K. Leggett	B. C. E.	Civil Engineer Pa. Ry.	Chicago, Ill.
R. Mabry	B. C. E.		
W. B. Merritt	B. S. A.	Lawyer	McKinney.
E. S. Middlebrook	B. C. E.	Lawyer	Columbus.
F. L. Montgomery	B. S. A.	Lawyer	Sherman.
H. Ness	B. S.	Asst. Prof. Horticulture	College Station.
J. F. Nichols	B. S.	Lawyer	Greenville.
J. R. Nichols	B. S. A.	Physician	Greenville.
B. F. Rogers	B. C. E.	Merchant	Jefferson.
*M. W. Shirley	B. M. E.		
W. M. Shirley	B. C. E.	County surveyor	McKinney.
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1890.

Name.	Degree.	Occupation.	Residence.
Anderson, W. D.	B. S. A.	City Secretary	Wichita Falls.
*Brittingham, W. F., Jr.	B. C. E.		
Backus, U.	B. M. E.	Fuente Coal Co.	Eagle Pass.
Flynt, H. C.	B. S. A.	Farmer	
Hanschke, Robt., Jr.	B. M. E.	Engineer	San Antonio.
Hernstadt, S. J.	B. C. E.	Grain Merchant	Dallas.
Hopkins, S. H.	B. S. A.	Lawyer	Gonzales.
Kyle, J. A.	B. S. A.	Physician	Houston.
Rudasill, W. S.	B. C. E.		
Ragsdale, J. W.	B. S. A.	Lawyer	Hallettsville.
Radford, J. S.	B. S. A.	Lawyer	Houston.
Schmidt, C. L.	B. M. E.	Machinist Mex. Nat. Ry.	Laredo.
Van Zandt, R. L.	B. C. E.	Bookkeeper in bank	Fort Worth.
Wangemann, A. E.	B. S. A.	Wholesale grocer	Brenham.
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1891.

Name.	Degree.	Occupation.	Residence.
Ahrenbeck, W. T.	B. M. E.	Minister	Navasota.
Cushing, Dan.	B. M. E.	Pharmacist	Columbus, Miss.
Dashiell, W. R.	B. C. E.	Physician	
Field, Herbert Y.	B. S. A.	Bookkeeper	Dallas.
Henderson, Hal	B. S. A.		Paris.
Luckett, Wm. H.	B. S. A.	Physician	New York.
Littlejohn, R. G.	B. C. E.	Insurance agent	Fort Worth.
McCormick, Geo., Jr.	B. M. E.	Draughtsman S. P. Ry.	Houston.
Meriwether, W. T.	B. C. E.	Ry. Land Agt.	San Antonio.
Middlebrook, R. M.	B. M. E.		Columbus.
Morrill, C. R.	B. C. E.	Draughtsman S. P. Ry.	Houston.
Nichols, W. I.	B. C. E.		Dallas.
Pfeuffer, U. S.	B. C. E.	Lumber merchant	New Braunfels.
Wellhausen, C. B.	B. M. E.	Bank cashier	Shiner.
Whealan, J. J.	B. M. E.	Machinist H. & T. C. Ry.	Houston.
Whitener, H. L.	B. S. A.	Physician	St. Louis, Mo.
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1892.

Name.	Degree.	Occupation.	Residence.
Adams, F. L.	B. S. A.	Medical student	New York.
Altgeld. E. J	B. C. E.	Clerk	San Antonio.
Beasley, W. S.	B. C. E.	Merchant	Lancaster.
Beyer. F. C	B. M. E.	....	Marion.
Bailey, C. C	B. C. E.	Merchant	Salado.
Buhler, C. W	B. C. E.	Auditor's office S. A. & A. P. Ry.	San Antonio.
Buford, F. L.	B. C. E.	Asst. engineer G. B. & K. C. Ry.	Beaumont.
Boykin. R. E.	B. M. E.	Teacher	Mount Calm.
Cook. E. A.	B. M. E	....	
Cox, D. W. S	B. C. E.	Oil mill clerk	Temple.
Cottingham, W. P.	B. C. E.	Draughtsman S. P. Ry.	Houston.
Ellis, B. V.	B. S. A.	Physician	Paris.
Floyd, J. F., Jr.	B. M. E	....	Long Leaf, La.
Gurley, D. R., Jr	B. C. E.	Supt. of farm	Waco.
Giesecke, W. E.	B. M. E	Civil Engineer	Torreon, Mex.
Grupe, Geo	B. M. E.	Engineer	College Station.
Moore, Rob	B. S. A.	Druggist	Pittsburg.
Moore, Tom E	B. S. A.	Medical student	Nashville, Tenn.
Neathery, Dan E.	B. S. A.	Merchant	Farmersville.
Ortiz, Josey A	B. C. E.	Merchant	Laredo.
Ratchford, W. P.	B. M. E	Supt. public schools	Fort Stockton.
Schumacher, H. C.	B. C. E.	Banker	La Grange.
Sauvignet, E. H.	B. S. A.	....	Laredo.
Wright, Edgar	B. C. E.	Counsel Tex. Mid. Ry.	Paris.
Watkins, W. A.	B. C. E.	Teacher	Bryan.

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1893.

Name.	Degree.	Occupation.	Residence.
Hutchinson, O. D.	B. S. A.	Merchant	Decatur.
Hawkins, J. W	B. S. A.	Law student U. of T.	Austin.
Kyle, T. M.	B. M. E.	Stock farmer	Nursery.
Lewis, L. L., M. S., '94.	B. S. A.	Prof. Veterinary Science A. & M. C.	Stillwater, O. T.
Mitchell, W. H	B. C. E.	Druggist	Holland.
O'Bar, J. H.	B. S. A.	Insurance agent	La Grange.
Parsons, B. C.	B. S. H.	Proprietor livery stable.	Kerrville.
Pearson, H. A.	B. C. E.	....	
Perlitz, W. E.	B. C. E.	Merchant	Schulenburg.
Rike, H. N	B. C. E.	Surveyor	Haskell.
Rollins, C. W.	B. C. E.	Surveyor	Kendleton.
Short, J. L.	B. S. A.	Physician	Houston.
Weidell, J.	B. C. E.	....	San Antonio.
Watson, W. D.	B. S. A.	Dairyman	Houston.
Wilson, W.	B. C. E.	County attorney	Port Lavaca.

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1894.

Name.	Degree.	Occupation.	Residence.
Abbott, E. G	B. C. E	Lawyer	Hillsboro.
Bruce, E. L	B. C. E.	Asst. cashier bank	Mineola.
Bocock, J. H	B. S. A.	Farmer	Houston.
Bittle, W. A	B. S. A.	Principal public schools.	Washington, La.
Dazey, W. L	B. C. E.	Dentist	Nashville, Tenn.
Ellis, Fort O	B. C. E.	With North La. Land Co.	Winnsboro, La.
Ferguson, A. M	B. S. H.	Asst. Botanist Shaw's Garden.	St. Louis.
Fowler, E. R	B. C. E.	Asst. Eng. R. R. Com.	Austin.
Gilbert, J	B. S. A.	Physician	Manor.
Houston, F	B. C. E.	Foreman S. P. Ry	West Lake, La.
Howell, J. W	B. S. A.	Merchant	Bryan.
Japhet, G	B. M. E.	Steamboat engineer	Houston.
Jonas, E. C	B. C. E.	Railroad office	San Antonio.
Jahn, F. C	B. S. H.	Horticulturist	Gonzales.
Kell, E	B. M. E.	Electrical engineer.	New Orleans, La.
Lewis, F	B. C. E	U. S. Geological Survey	Paul's Valley, Ind. Ter.
*Luckett, W. M	B. M. E.		
Massenburg, W. G	B. C. E.	Civil engineer	Texarkana.
Meyers, W. G	B. M. E.	Civil engineer	Meridian, Miss.
Mitchell, A	B. C. E.		
Oglesby, G. B	B. C. E.		Cedar Mills.
Peters, F	B. M. E.	Draughtsman	Houston.
Pittuck, B. C	B. S. A.	Agriculturist Texas Experiment Station.	College Station.
Ross, F. R	B. S. A.	Physician	Waco.
Rose, W. F	B. M. E.	Draughtsman S. A. & A. P. Ry.	San Antonio.
Ross, J. G	B. C. E.	Employe S. P. Ry	Del Rio.
Speer, R. H	B. C. E.	Real estate agent	Fort Worth
Sewell, M. S	B. C. E.	Dry goods clerk	McGregor.
Smither, R	B. M. E.	Clerk	Huntsville.
Schmidt, D. T. C	B. C. E.	Foreman S. P. Ry	Del Rio.
Todd, A. M	B. C. E.	U. S. Levee Inspector	Greenville, Miss.

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1895.

Name.	Degree.	Occupation.	Residence.
Adams, A. S.	B. C. E.	Assistant engineer H. & T. C. Ry.	Waxahachie.
Amthor, W.	B. C. E.	Insurance agent	Waco.
Bloor, A. W.	B. S. A.		Manor.
Burgoon, C. E.	B. M. E.	Asst. Prof. Mech. Eng.	College Station.
Burleson, R. W.	B. M. E.	Teacher	Waco.
Coulter, H. T.	B. S. H.	Medical student	New York.
Coulter, W.	B. M. E.	Merchant	Bryan.
Clark, H.	B. S. A.	Medical student	Fort Worth.
Duggan, A. P.	B. C. E.	Deputy district clerk	San Saba.
Farmer, A. G.	B. M. E.	Stock raiser	Junction City.
Fitzgerald, A. H.	B. S. A.	Druggist	Gonzales.
Holman, J. R.	B. C. E.	Civil engideer	Truxillo, Honduras.
Hutson, W. F.	B. S. A.		College Station.
Jordan, H. P.	B. C. E.	Student	Austin.
Law, F. M.	B. S. A.	Bank bookkeeper	Bryan.
Martin, H. B.	B. M. E.	County surveyor	Marlin.
Moore, W. M.	B. C. E.	Civil engineer	Truxillo, Honduras.
Moursund, A. F.	B. C. E.	Eng. Corps S. P. Ry.	Breaux Bridge, La.
Mouser, E. B.	B. S. A.	Medical Student	Louisville, Ky.
McDonald, H. F.	B. M. E.		McKinney.
McMillan, M.	B. M. E.	Medical Student	Galveston.
Polk, W. A.	B. C. E.	Civil Eng. G. C. & S. F. Ry.	Corsicana.
Smith, A. U.	B. M. E.		Huntsville.
Watkins, R. C.	B. C. E.	Civil Eng. Dept. S. P. Ry.	Del Rio.
Wells, D. D.	B. S. A.	Student	New Orleans.
White, G. R.	B. C. E.	Student	Lexington, Ky.
Wight, A. T.	B. C. E.	Merchant	Roxton.

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1896.

Name.	Degree.	Course.	Occupation.	Residence.
Bittle, P. B	B. S.	A.	Prof. Math. and Commandant T. M. I.	Llano.
Blount, S. L.	B. S.	A.	Student	Philadelphia.
Burney, J. W.	B. S.	M. E.	Machinist S. P. shops	San Antonio.
Cobb, S. A.	B. S.	C. E.	Field Assistant U. S. Geological Survey.	Denison.
Eberspacher, G.	B. S.	M. E.	Draughtsman	Houston.
Finney, C. B.	B. S.	C. E.	Civil engineer	C. P. Diaz, Mexico.
Gilmore, H. A.	B. S.	M. E.		
Goldberg, I. L.	B. S.	H.	Merchant	Jefferson.
Hildebrandt, A. M.	B. S.	H.	Student A. & M. College.	College Station.
Howell, R. W.	B. S.	A.	Merchant	Bryan.
Hutson, H. L.	B. S.	M. E.	Clerk	Galveston.
Kyle, H. C.	B. S.	A.	Foreman of farm A. & M. College.	College Station.
Kerr, E. W.	B. S.	M. E.	Asst. Prof. Mech. Eng.	College Station.
Miley, J. H.	B. S.	C. E	Bookkeeper	Austin.
McNeil, J. C.	B. S.	C. E.	Surveyor	Brazoria.
Park, C. M.	B. S.	C. E.	Sec. & Bus. Mgr. Southern Mercury Pub. Co.	Dallas.
Rhodes, S. E.	B. S.	M. E.	Bookkeeper	Bryan.
Rodriguez, D.	B. S.	C. E.	Student	Ithaca, N. Y.
Rosenthal, H. H.	B. S	C. E.	Clerk	Jefferson.
Sanders, W. O.	B. S.	H.	Clerk	Bryan.
Scherer, C. L.	B. S.	C. E.	Eng. Dept. G.C.&S.F.Ry.	Galveston.
Wisdom, F. L.	B. S.	C. E.	Shipping clerk	Alline. Ark.
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1897.

Name.	Degree.	Course.	Occupation.	Residence.
Clayton, W. D.	M. S.	A.	Foreman expt. farm	Audubon Park, La.
Bryan, B. F.	B. S.	A.	Foreman dairy farm	Denton.
Buhler, C. M.	B. S.	M. E.	Auditor's office S.P. Ry.	Victoria.
Cavin, G. P.	B. S	A.		Dallas.
Couch, E.	B. S.	M. E.		Waxahachie.
Carson, A. B.	B. S.	C. E.	Teacher	Merle.
Cotton, H.	B. S.	C. E.		Houston.
Cavitt, H.	B. S.	M. E.		Bryan.
Cohn, S. L.	B. S.	C. E.		Ennis.
Eldridge. H. M.	B. S.	C. E.		Brenham.
Faust, W.	B. S.	C. E.	Assistant cashier bank	New Braunfels.
Hutchinson, W. F.	B. S.	C. E.		Houston.
Hudgins, F. D.	B. S.	C. E.	Civ.Eng.S.&R.R.V.Ry	Shreveport.
Kyle, A. J.	B. S.	A.	Stock raiser	Quanah.
Knolle, O. J.	B. S.	A.	Medical student	Industry.
Mead. John	B. S.	C. E.	Student A. & M. College.	College Station.
Moursund, E. M.	B. S.	C. E.		Fredericksburg.
Overshiner, E. M.	B. S.	C. E.	Teacher	Valley View.
Rollins, H. M.	B. S.	M. E.	Engineer	College Station.
Shires, G. M.	B. S.	M. E.		Houston.
Shires, F. N.	B. S.	M. E.	Machinist H.E.&W.T.Ry	Houston.
Sternenberg, E. H.	B. S.	C. E.		Industry.
Todd, C. C.	B. S.	H.	Asst. Prof. Chemistry	College Station.
Ueckert, H. H.	B. S.	C. E.		Reinhardt.
Vinther. F.	B. S.	M. E.	Machinist	Pine Bluff, Ark.
Wheat, N.	B. S.	C. E.	Stock raiser	Pecos City.
Williams, L. D.	B. S.	C. E.		Austin.
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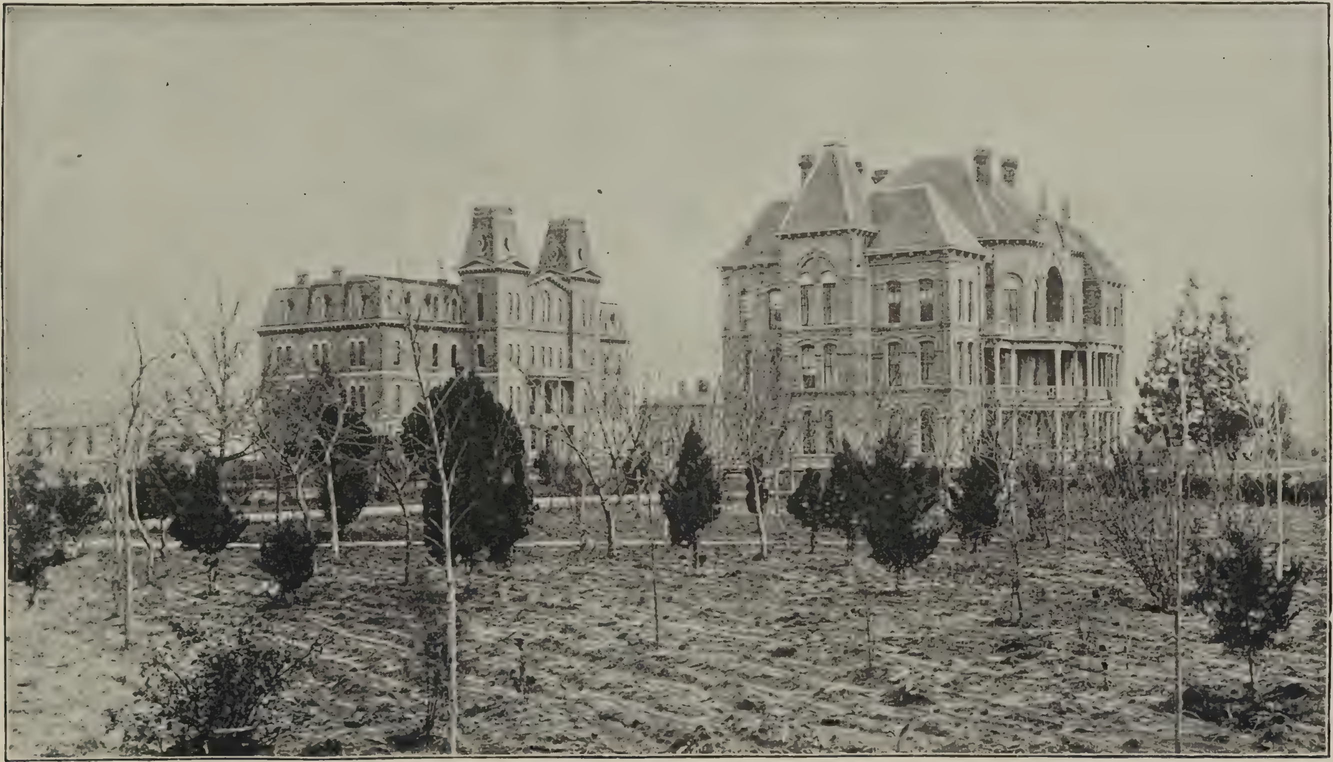


Main Building. Ross Hall.

Winter view.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

This College owes its origin to

An Act Donating Public Lands to the several States and Territories which may Provide Colleges for the Benefit of Agriculture and the Mechanic Arts.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there be granted to the several States, for the purpose hereinafter mentioned, an amount of public land, to be apportioned to each State, a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty; provided, that no mineral land shall be selected or purchased under the provisions of this act.

Sec. 2. And be it further enacted, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections not less than one-quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said States shall be entitled shall be selected from such lands within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip, to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said States and the proceeds applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever; provided, that in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents or less per acre; and, provided further, that no more than one million acres shall be located by such assignees in any one of the States; and provided further, that no such location shall be made before one year from the passage of this act.

Sec. 3. And be it further enacted, That all the expenses of management, superintendence and taxes from date of selection of said lands previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

Sec. 4. And be it further enacted, That all moneys derived from the sale of the lands aforesaid, by the States to which the lands are apportioned, and from the sale of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than 5 per centum upon the par value of said stocks, and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section 5 of this act), and the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

Sec. 5. And be it further enacted, That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First. If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund may remain undiminished, and the annual increase shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum not exceeding 10 per centum upon the amount received by any State under the provisions of this act may be expended for the purchase of lands for sites or experimental farms, wherever authorized by the respective Legislatures of said States.

Second. No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

Third. Any State which may take and claim the benefit of the provisions of this act shall provide, within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall cease, and said State shall be bound to pay to the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth. An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters, including State industrial and economical statistics, as may be supposed useful, one copy of which shall be transmitted by mail free by each to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the State at the maximum price, and the number of acres proportionately diminished.

Sixth. No State, while in a condition of rebellion or insurrection against the government of the United States shall be entitled to the benefits of this act.

Seventh. No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its Legislature within two years from the date of its approval by the President.

Sec. 6. And be it further enacted, That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

Sec. 7. And be it further enacted, That land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws; provided, their minimum compensation shall not be thereby increased.

Sec. 8. And be it further enacted, That the governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved July 2, 1862.

And to the following amendment:

An act to amend the fifth section of an act entitled "An act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts," approved July 2, eighteen hundred and sixty-two, so as to extend the time within which the provisions of said act shall be accepted and such Colleges established.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the time in which the several States may comply with the provisions of the act of July 2, eighteen hundred and sixty-two, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," is hereby extended so that the acceptance of the benefits of the said act may be expressed within three years from the passage of this act, and the colleges required by the said act may be provided within five years from the date of filing of such acceptance with the Commissioner of the General Land Office; provided, that when any Territory shall become a State and be admitted into the Union, such new State shall be entitled to the benefits of said act of July 2, eighteen hundred and sixty-two, by expressing acceptance therein required within three years from the date of its admission into the Union, and providing the college or colleges within five years of such acceptance, as prescribed in this act; provided further, that any State that has heretofore expressed its acceptance of the act herein referred to shall have the period of five years within which to provide at least one college, as described in the fourth section of this act, after the time for providing said college, according to the act of July 2, eighteen hundred and sixty-two, shall have expired.

Approved July 23, 1865.

By joint resolution, approved November 1, 1871, the Legislature of Texas formally accepted the provisions of the congressional acts, and the State received from the general government scrip for 180,000 acres of public land, the proceeds of which constitute the present permanent endowment fund of this College, and is in Texas 7 per cent gold frontier defense bonds, to the amount of $174,000.

The Legislature fulfilled its obligations by passing "An act to provide for the establishment of an Agricultural and Mechanical College of Texas," approved April 17, 1871, and by making liberal successive appropriations (aggregating $187,000) for the buildings and equipments necessary for putting the institution in operation. And the county of Brazos secured its location within its limits by donating to the State the present College farm, a tract of 2416 acres, five miles south of the town of Bryan.

Finally, the Constitution of 1876, article VII, provided: "Section 3. The Agricultural and Mechanical College of Texas, established by the act of the Legislature, passed April 17, 1871, located in the county of Brazos, is hereby made and constituted a branch of the University of Texas, for instruction in agriculture, the mechanic arts, and the natural sciences connected therewith."

The College was formally opened for the reception of students October 4, 1876.

The Constitution of Texas provides that taxes may be raised for the maintenance and support of the College.

The following act of the Legislature of Texas is now the law governing the College:

An Act regulating the government of the Agricultural and Mechanical College of Texas, as approved March 9, 1875, and amended March 30, 1881.

I. The Board of Directors of said College shall consist of five members.

II. The Directors provided for in the preceding article shall be appointed by the Governor, to be selected from the different portions of the State, and shall hold office for six years or during good behavior, and until their successors are qualified.

III. The Governor shall be authorized to call said Board together after their appointment, and said Board shall at their first meeting elect a president of the Board, who shall thereafter be authorized to call said Board together for the transaction of business whenever he deems it expedient, and a majority of said Board shall constitute a quorum for the transaction of business.

IV. Each of said Directors shall receive their actual expenses incurred in attending the meetings of the Board, to be paid out of the interest of the University fund, on accounts certified by them respectively to be correct, and approved by the Governor.

V. The Secretary of State shall forward a certificate to each Director within ten days after his appointment, notifying him of the fact of such appointment; and should any Director so appointed and notified fail for ten days to give notice to the Governor of his acceptance, his appointment shall be deemed void and his place filled as in case of vacancy.

VI. The Board of Directors shall appoint the President and Professors of the College, and such other officers as they may think proper to put the College into successful operation, and shall make such by-laws, rules and regulations for its government as they deem meet and proper for that purpose, and shall regulate the course of study, rates of tuition, manner of performing labor, and the kind of labor to be performed by the students, together with the course of discipline necessary to enforce the faithful discharge of all the duties of all officers, professors and students, and shall have same printed and circulated for the benefit of the people of the State and officers and students of the College.

VII. The Board of Directors shall elect a Secretary of the Board, whose duty it shall be to keep in a well-bound book all the proceedings had by this Board, and he shall be allowed by said Board such compensation as they may allow; provided, that the same does not exceed five hundred dollars per annum.

VIII. The interest on the amount of one hundred and seventy-four thousand dollars in 7 per cent gold interest-bearing frontier bonds of Texas, now in the State treasury to the credit of the College, being set apart for that purpose, shall be drawn by the Board of Directors on vouchers audited by the Board, or approved by the Governor and attested by the Secretary, and on filing such vouchers the Comptroller shall draw his warrant on the State treasury for the same, from time to time as they may be needed, to pay the directors, officers and professors of the College.

The following joint resolution was passed by the Sixteenth Legislature:

Joint resolution authorizing the State Librarian to turn over to the Agricultural and Mechanical College of Texas specimens of minerals and other geological specimens in the geological department of said library in certain cases, and copies of all public documents of the State, published for distribution, and all apparatus belonging to the old geological survey.

Section 1. *Be it Resolved by the Legislature of the State of Texas:* That the State Librarian be and he is hereby authorized and required to turn over to the Agricultural and Mechanical College of Texas the duplicate specimens in the hands of the agent of the International Railroad Company of all minerals and other geological specimens in the geological department in said library, and copies of all public documents of the State published for distribution, and apparatus belonging to the old geological survey, for the use and benefit of said College.

Sec. 2. That said librarian be required to take an inventory of all specimens thus turned over to said College by him, and file the same in his office.

Sec. 3. The near approach of the close of this session of the Legislature, and the pressing need of geological specimens at said College for the better instruction of its pupils, creates an imperative public necessity for the suspension of the constitutional rule requiring this resolution to be read on three several days; therefore be it further resolved, that the constitutional rule be suspended and this resolution take effect and be in force from and after its passage.

Approved July 9, A. D. 1879.

An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress, approved July second, eighteen hundred and sixty-two.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated out of any money in the treasury not otherwise appropriated, arising from the sale of public lands, to be paid as hereinafter provided, to each State and Territory, for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts, now established, or which may be hereafter established, in accordance with an Act of Congress, approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years, by an additional sum of one thousand dollars over the preceding year; and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematics, physical, natural, and economic science, with special reference to their applications in the industries of life and to the facilities for such instruction; provided, that no money shall be paid out under this act to any State or Territory for the support or maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this Act, if the funds received in such State or Territory be equitably divided, as hereinafter set forth; provided, that in any State in which there has been one college established in pursuance of the act of July second, eighteen hundrd and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the Act to which this act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this Act, between one college for white students, and one institution for colored students, established as aforesaid, which shall be divided into two parts, and paid accordingly; and thereupon such institution for colored students shall be entitled to the benefits of this Act, and subject to its provisions, as much as it would have been if it had been included under the Act of eighteen hundred and sixty-two; and the fulfillment of the forgoing provisions shall be taken as a compliance with the provisions in reference to separate colleges for white and colored students.

Sec. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the treasury of the United States, to the State or Territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges, or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the first day of September of each year, a detailed statement of the amount so received, and of its disbursement. The grants of money authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants; provided, that payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this act, shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

Sec. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support and maintenance of colleges, or of institutions for colored students, as provided in this act, shall, by any action or contingency, be diminished or lost, or be misplaced, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings. An annual report by the president of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to such colleges, with their cost and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail, free, to all other colleges further endowed under this act.

Sec. 4. That on or before the first day of July in each year after the passage of this act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory, whether it is entitled to receive its share of the annual appropriation for colleges, or for institutions for colored students, under this act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the treasury; and the Secretary of the Interior is hereby charged with the proper administration of this law.

Sec. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

Sec. 6. Congress may at any time amend, suspend or repeal any or all of the provisions of this act.

Approved August 30, 1890.

OFFENSES RELATING TO PUBLIC BUILDINGS.

Chapter 5 (S. B. No. 41). An act to amend article 417, chapter 4, title 13, of the Penal Code of the State of Texas.

Whereas, for the purpose of preserving the new State capitol it becomes necessary to better define the offenses set out in the aforesaid act; therefore,

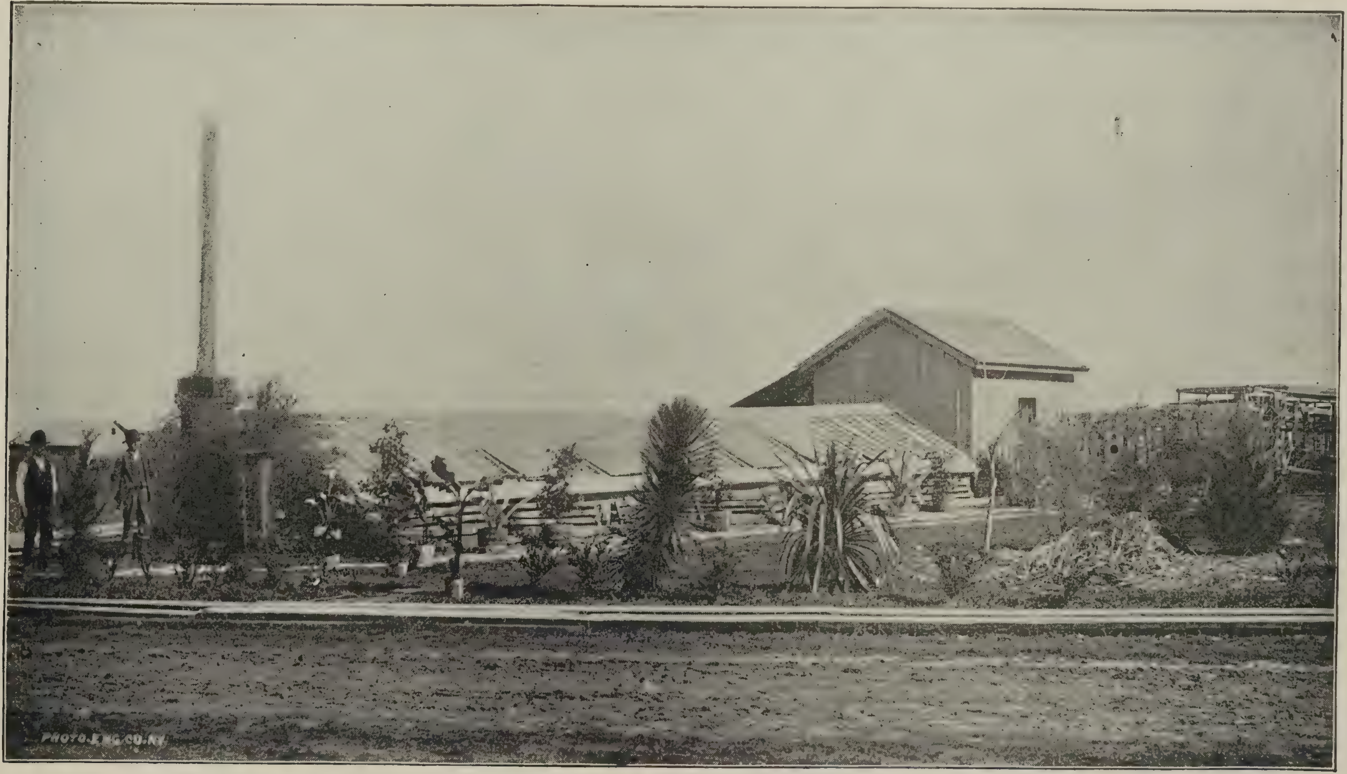
Section 1. *Be it enacted by the Legislature of the State of Texas,* That article 417, chapter 4, title 13, of the Penal Code of the State of Texas, which took effect July 24th, A. D. 1879, be amended so as to read as follows:

Sec. 2. Article 417. If any person shall wilfully injure or deface any public building or the furniture therein in this State, he shall be fined not less than five nor more than five hundred dollars. The word deface in this act shall be held to apply to writing, carving, or scratching on the walls or plastering or furniture of said building, or staining the same with paint or any article which will produce a discoloration of the same.

Sec. 3. Whereas, the preservation of the State capitol building, together with other public buildings, creates an imperative public necessity, and an emergency exists requiring the constitutional rule requiring bills to be read on three several days in each house to be suspended, and it is so suspended, and that this act take effect and be in force from and after its passage, and it is so enacted.

[Note.—The foregoing act originated in the Senate, and passed the same by a vote of 27 yeas, no nays; and passed the House by a vote of 76 yeas, 5 nays.]

Approved May 14, 1888.



GREENHOUSE.

TEXAS AGRICULTURAL EXPERIMENT STATIONS.

ORGANIZATION.

In accordance with the Act of Congress, the Board of Directors of the Agricultural and Mechanical College of Texas, at a meeting held January 25, 1888, established the Experiment Station as a department of the College. Provision was made for assigning to the Station department such part of the College farm, buildings and other equipment of the College as would be found necessary to prosecute the work, in addition to the outfit supplied from the funds of the Station.

The Director of the Station will have general supervision of all experimental work, correspondence, and publication of bulletins and reports.

The professors of Agriculture, Chemistry, Horticulture and Veterinary Science will have charge of Station work in their several departments.

LOCATION AND SUPPORT.

The Main Station, located in 1888 on the grounds of the Agricultural and Mechanical College, is supported entirely by appropriations from the Federal government.

A permanent sub-station, largely devoted to horticulture and fruit raising, was established in 1895 in Bee county for the purpose of testing new fruits and vegetables, as to their adaptability and plant food requirements in that portion of the State. This station is some two hundred miles south of the main station. This station is supported by State appropriations made biennially for this particular purpose.

OBJECTS.

The objects of the Experiment Station and of the sub-station are clearly set forth in section two (2) of the act of Congress to which they owe their establishment, a copy of which law is found on pages 102-104 of this Catalogue.

The Governing Board of the Station desire to make this work of as much value to the agricultural and horticultural interests of the State as may be possible. The work will be conducted at all times with special reference to giving information that may be of some practical use to the farmer. To enable them to carry out this policy, all associations having the advancement of agriculture in view—the Grange, Alliance, associations of stock breeders, or fruit growers, or other organizations—will be invited from time to time to appoint delegates to meet with the board of directors and officers of the Station, and consult and advise with them in regard to the work of the Station. Suggestions will be gladly received at all times from any one who is interested in advancing the agricultural interests of the State.

ADVANTAGE TO COLLEGE.

Financially, the Station will not be of direct benefit to the College. To compensate the College, however, for the use of property assigned to the work of the Station, such work will add largely to the ability of the College to impart more thorough instruction in scientific and practical agriculture, horticulture, etc. College students will be employed in the work of the Station to as great an extent as may be found practicable, and the plant of the Station and experimental work in progress will increase the means of illustration of the College and be of special advantage to the students in providing practice and training in Agricultural and Horticultural work under skilled instructors. The Station will not add to the expense of the College in any way, as such time as may be given by professors or other employes in experimental work will be paid for from the Station fund, and the value of the time lost to the College deducted from the salary that would be paid by the College if the entire time was given to College work; and in order not to impair the efficiency of instruction the board has provided for additional instructors to relieve the professors of a portion of their class work.

An act to establish Agricultural Experiment Stations in connection with the colleges established in the several States under the provisions of an act approved July 2, 1862, and of the acts supplementary thereto.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled,* That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural departments of colleges, in each State or Territory, established, or which may be hereafter established in accordance with the provisions of an act approved July 2, 1862, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements to said act, a department to be known and designated as an "Agricultural Experiment Station;" provided, that in any State or Territory in which two such colleges have been or may be so established, the appropriations hereinafter made to such State or Territory shall be equally divided between such colleges, unless the Legislature of said State or Territory shall otherwise direct.

Sec. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analyses of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and foliage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories.

Sec. 3. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate from time to time such lines of inquiry as to him shall seem most important, and in general to furnish such advice and assistance as will best promote the purposes of this act. It shall be the duty of each of said stations, annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of the said stations, to the said Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

Sec. 4. The bulletins or reports of progress shall be published at said stations at least once in three months; one copy of each shall be sent to each newspaper in the States and Territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge of postage, under such regulations as the Postmaster General may from time to time prescribe.

Sec. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments and printing and distributing the results as hereinbefore prescribed, the sum of $15,000 is hereby appropriated to each State, to be specially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of section 2 of this act, out of any money in the treasury proceeding from the sale of public lands, to be paid in equal quarterly payments on the first day of January, April, July, and October of each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, 1887; provided, however, that out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five (5) per centum of such annual appropriations may be so expended.

SEC. 6. That whenever it shall appear to the Secretary of the Treasury, from the annual statement of receipts and expnditures of any of said stations, that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the next succeeding annual appropriation to such station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this act shall be so construed to impair or modify the legal relation existing between any of the said colleges and the governments of the States and Territories in which they are respectively located.

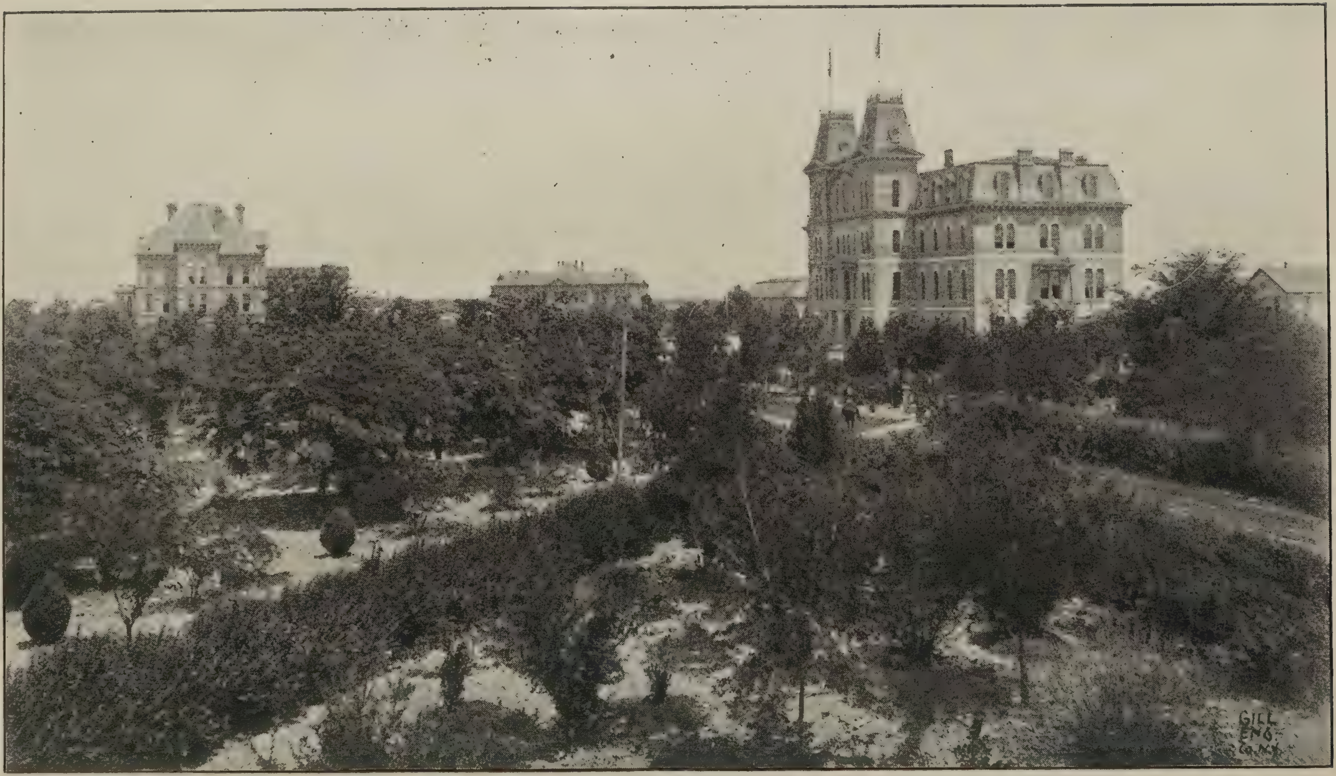
SEC. 8. That in States having colleges entitled under this section to the benefits of this act, and having also Agricultural Experiment Stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiments at stations so established by said States; and in case any State shall have established, under the provisions of said act of July 2, aforesaid, an agricultural department or experimental station in connection with any university, college or institution not distinctively an agricultural college or school, and such State shall have established, or shall hereafter establish, a separate agricultural school which shall have connected therewith an experimental farm or station, the Legislature of such State may apply, in whole or in part, the appropriation by this act made to such separate agricultural college or school, and no Legislature shall by contract, express or implied, disable itself from so doing.

SEC. 9. That the grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants; provided, that payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

SEC. 10. Nothing in this act shall be held or construed as binding the United States to continue any payments from the treasury to any or all of the States or institutions mentioned in this act, but Congress may, at any time, amend, suspend or repeal any or all of the provisions of this act.

SPECIAL ATTENTION IS CALLED TO THE SPECIMEN ENTRANCE EXAMINATIONS, PAGES 19, 20, 21, 22. YOUNG MEN INTENDING TO APPLY FOR ADMISSION ARE URGED TO SATISFY THEMSELVES, BEFORE COMING TO THE COLLEGE, THAT THEY CAN ANSWER SUCH QUESTIONS.

STUDENTS SHOULD NOT ARRIVE BEFORE MONDAY, SEPT. 11.



Ross Hall. Austin Hall. Main Building.

Main Building. Assembly Hall. Ross Hall.

Twenty-Third

ANNUAL CATALOGUE

SESSION 1898-99.

Agricultural and Mechanical College

OF TEXAS.

Railroad Depot and Money Order Office:
College Station, Texas.

AUSTIN, TEXAS:
VON BOECKMANN, SCHUTZE & CO., STATE CONTRACTORS.
1899.

CALENDAR

1899

JANUARY.

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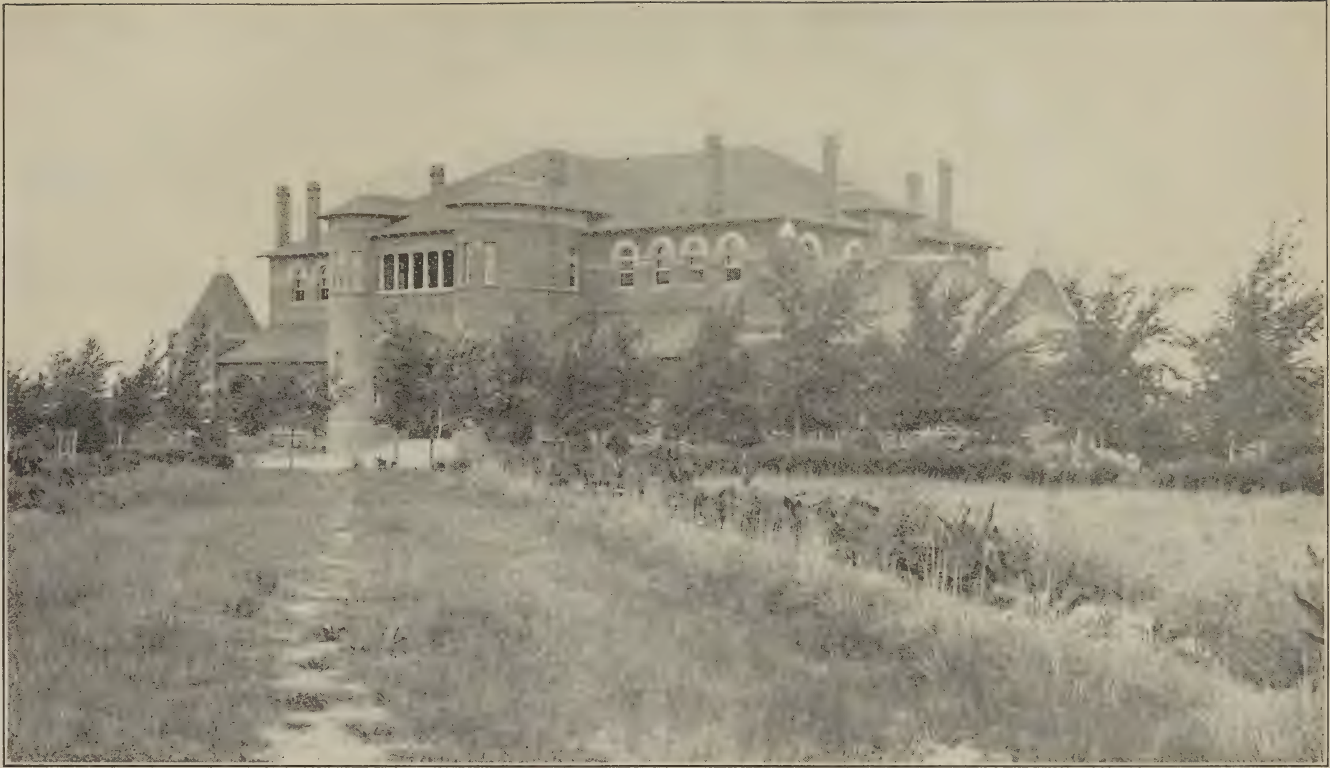

Mess Hall.

CALENDAR
1900

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COLLEGE CALENDAR.

1899.

Entrance Examinations begin Monday, September 11.
Fall Term begins Wednesday, September 13.
Anniversary Austin Society, November 15.
National Holiday, Thanksgiving Day.
Christmas Holiday, December 22 to January 2, 1900.

1900.

Winter Term begins Tuesday, January 3, 1900.
National Holiday, February 22.
Texas Independence Day, March 2.
Spring Term begins March 15.
Anniversary Calliopean Society, March 16.
San Jacinto Day, April 21.
Final Examinations begin June 4.
Commencement Sunday, June 10.
Exhibition of Departments and of Work of Students, June 11.
Commencement Day, June 12.

BOARD OF DIRECTORS.

HON. F. A. REICHARDT, President	Houston.
HON. JEFFERSON JOHNSON, Commissioner of Agriculture, Insurance, Statistics and History, *ex-officio*	Austin.
HON. M. SANSOM	Alvarado.
HON. W. R. CAVITT, Secretary	Bryan.
HON. F. P. HOLLAND	Dallas.
HON. CHARLES ROGAN	Brownwood.

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(Chemist to Experiment Station.)

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(Veterinarian to Experiment Station.)

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Professor of Civil Engineering and Physics.

R. H. PRICE, B. S.,
Professor of Horticulture, Botany and Entomology.
(Horticulturist to Experiment Station.)

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Professor of Languages.

J. H. CONNELL, M. Sc.,
Professor of Agriculture.
(Director of Experiment Station.)

C. W. HUTSON,
Professor of English and History.

H. B. MARTIN, B. M. E.,
Professor of Military Science, and Commandant of Cadets.

FREDERICK W. MALLY, M. Sc.,
Professor of Entomology.

OTHER INSTRUCTORS.

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Associate Professor of Mathematics.

W. B. PHILPOTT, M. S.,
Associate Professor of English and History.

P. S. TILSON, M. S.,
Associate Professor of Chemistry.
(Associate Chemist to Station.)

A. L. BANKS, A. B., M. S.,
Associate Professor of Mathematics.

D. W. SPENCE, B. Sc., C. E.,
Associate Professor of Civil Engineering and Physics, and Drawing.

H. NESS, M. S.,
Assistant Professor of Horticulture and Botany.

A. M. SOULE, B. S. A.,
Asssistant Professor of Agriculture.

H. W. SOUTH,
Assistant Professor of English and History, and Languages.

C. E. BURGOON, B. M. E.,
Assistant Professor of Mechanical Engineering.

E. W. KERR, B. S.,
Assistant Professor of Mechanical Engineering.

PROFESSOR PURYEAR,
Secretary of the Faculty, and Librarian.

PROFESSOR BITTLE,
Chaplain.

OTHER OFFICERS.

A. C. GILLESPIE, M. D.,
Surgeon.

J. A. BAKER,
Secretary.

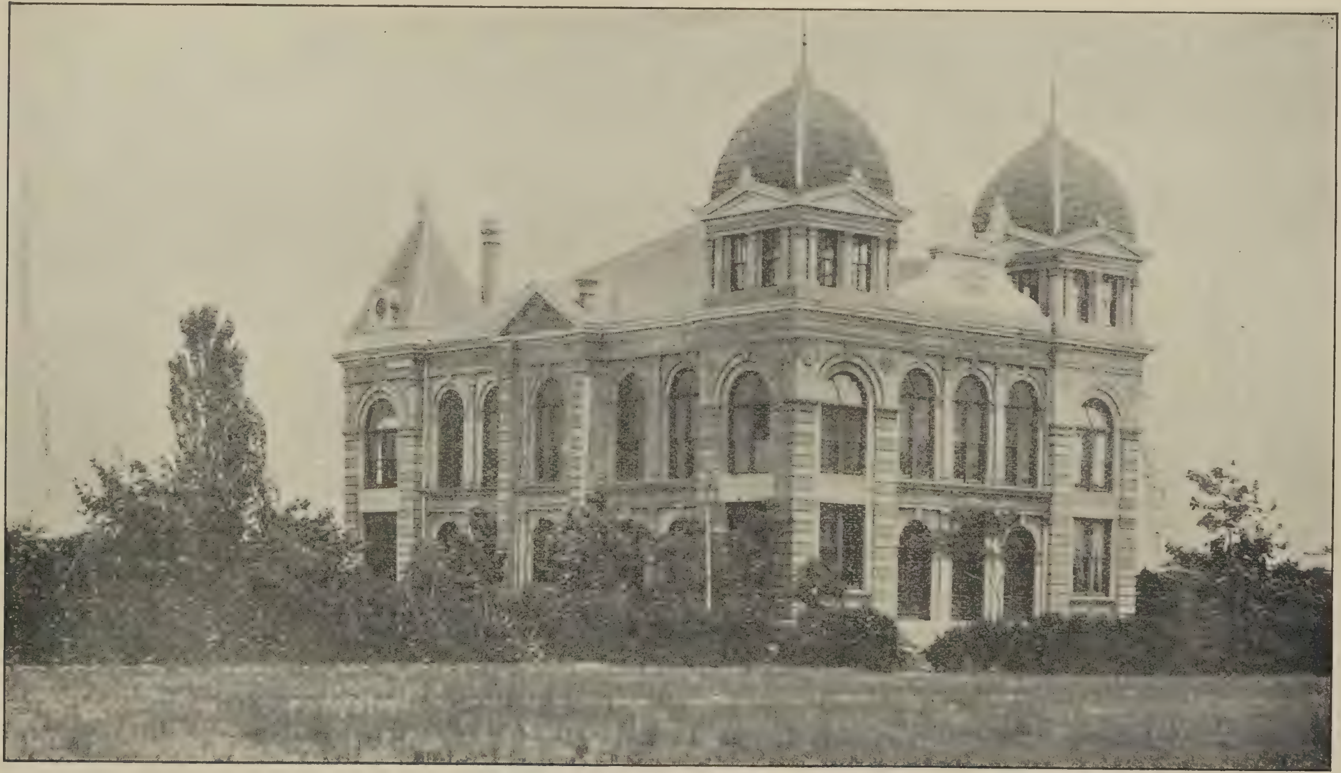
J. G. HARRISON, A. B.,
Bookkeeper.

B. SBISA,
Steward.

C. A. LEWIS,
Foreman of the Carpenter Shop.

H. C. KYLE, B. S.,
Foreman of the Farm.

G. EBERSPACHER,
Florist.



Assembly Hall.

CATALOGUE OF STUDENTS.

EXPLANATION.

M. S., Master of Science; M. E., Mechanical Engineer; C. E., Civil Engineer; Agr., Agriculture; Hort., Horticulture; Mech. Eng., Mechanical Engineering; Civ. Eng., Civil Engineering.

POST GRADUATES.

Name.	Degree.	Residence.
C. E. Burgoon, B. M. E	M. E	College Station.
E. W. Kerr, B. S	M. E	College Station.
W. C. Martin, B. S	M. S	College Station.
John Meade, B. S	C. E	College Station.

FIRST CLASS.

Name.	Course.	Residence.
Adams, J. M	Mech. Eng	Buda.
Astin, E. H	Mech. Eng	Mumford.
Barnes, S. E	Agr	Brighton.
Bland, L. F	Agr	College Station.
Brewer, H. A	Mech. Eng	Lytton Springs.
Bullard, T. O	Mech. Eng	Britton.
Campbell, R. W	Mech. Eng	Marshall.
Carson, R. C	Mech. Eng	College Station.
Cousins, R. W	Mech. Eng	Austin.
Dwyer, W. F	Agr	San Marcos.
Evans, C. D	Civ. Eng	Austin.
Horn, T. L	Mech. Eng	Rhea Mills.
Hubbard, T. A. G	Civ. Eng	Paris.
Kyle, E. J	Hort	Kyle.
Lewis, M	Mech. Eng	McKinney.
Love, A. C	Civ. Eng	Franklin.
Martin, E. L	Civ. Eng	Kyle.
Monroe, J. S	Civ. Eng	Rio Grande City.
Poulter, A. J	Hort	Howard.
Sloss, A. M	Agr	Taylor.
Soles, Clayton	Mech. Eng	College Station.
Sterns, J. B	Civ. Eng	Houston.
Whisenant, W. H	Hort	Kyle.
Whittle, C. T	Mech. Eng	Sulphur Springs.

SECOND CLASS.

Name.	Course.	Residence.
Abrahams, J. E	Mech. Eng	New Braunfels.
Austin, H. B	Mech. Eng	Belton.
Baumgarten, Chas	Agr	Schulenburg.
Beall, T. D	Mech. Eng	El Paso.
Biering, S. R	Civ. Eng	Hitchcock.
Bittle, T. C	Civ. Eng	College Station.
Blackburn, D. C	Agr	Mineral Wells.
Boettcher, R. B	Mech. Eng	Weimar.
Bryan, W. I	Mech. Eng	Chambersville.
Buhler, Geo. A	Civ. Eng	Victoria.
Buhler, W. A	Mech. Eng	Victoria.
Carter, J. D	Civ. Eng	Kingston.
Clement, T. H., Jr	Civ. Eng	Port Lavaca.
Coulter, R. E	Mech. Eng	Texarkana.
Davis, J. L	Mech. Eng	El Paso.
Faust, H	Mech. Eng	New Braunfels.
Fitzgerald, Leonard	Mech. Eng	Houston.
Griffiths, T. W., Jr	Mech. Eng	Dallas.
Grote, Alex. R	Mech. Eng	Blowout.
Hutson, Cary	Civ. Eng	College Station.
Jackman, M	Hort	Kyle.
Jackson, W. B	Civ. Eng	Ozro.
Japhet, J. S	Mech. Eng	Houston.
Kahn, M. S	Hort	Hallettsville.
Lewis, J	Agr	McKinney.
Luhrsen, C. W	Civ. Eng	Stratton.
McCormick, S	Mech. Eng	Columbus.
McGinnis, F. K	Hort	Terrell.
Melgaard, B. P	Civ. Eng	Brazoria.
Mosley, Hal	Mech. Eng	Dallas.
Myers, O. W	Mech. Eng	Josephine.
Riley, G. M	Civ. Eng	Houston.
Roark, J. W	Agr	Corpus Christi.
Roeder, B. G	Mech. Eng	Lockhart.
Rogers, C. P	Hort	Kyle.
Saunders, W. K., Jr	Civ. Eng	Belton.
Scherer, B. G	Mech. Eng	Anahuac.
Short, A. K	Agr	Decatur.
Simpson, O	Civ. Eng	Jacksboro.
Simpson, S	Civ. Eng	Hallettsville.
Thomas, L. L	Mech. Eng	Bonham.
Thrower, J. D	Agr	Mayhew, Miss.
Tilley, H. P	Mech. Eng	Jacksonville.
Toberman, C. E	Mech. Eng	Seymour.
Walden, Wm	Agr	Dickinson.
Wheat, Gus	Mech. Eng	Rock Springs.
Winkler, A	Agr	The Grove.
Yarborough, E. H	Agr	Navasota.

THIRD CLASS.

Name.	Course.	Residence.
Alexander, C. E	Agr	Cedar Creek.
Alexander, G. E	Agr	Galveston.
Anderson, E. C	Civ. Eng	Whitesboro.
Armstrong, Walter	Agr	Wharton.
Atlee, Tom	Mech. Eng	Laredo.
Barron, L. W	Mech. Eng	Battle.
Barton, T. H	Agr	Marlin.
Beard, E. J	Mech. Eng	Bryan.
Bolton, John	Mech. Eng	Wharton.
Brewster, C. W	Agr	Circleville.
Brown, R	Civ. Eng	Austin.
Bruce, C. H	Agr	Mineola.
Bryan, C. M	Mech. Eng	Chambersville.
Buchanan, A. P	Mech. Eng	Harvey.
Bundy, O. T	Agr	Milford.
Burleson, R. C	Civ. Eng	San Saba.
Burns, D	Mech. Eng	Colorado.
Cavitt, H. R	Mech. Eng	Bryan.
Carpenter, W. F	Mech. Eng	Toyah.
Chesley, A	Mech. Eng	Bellville.
Clanton, C	Mech. Eng	Ennis.
Clark, C. S	Mech. Eng	Eolian.
Clegg, W. O	Mech. Eng	Trinity.
Cliett, O. W	Agr	Martindale.
Coleman, J. H., Jr	Mech. Eng	Rock Springs.
Collins, W. B	Civ. Eng	Llano.
Couch, J. E	Mech. Eng	Foreston.
Colwick, O. J	Mech. Eng	Norse.
DeWare, Robt	Mech. Eng	Jefferson.
Donalson, S. J	Mech. Eng	Kyle.
Dross, P	Mech. Eng	Bellville.
Durham, E. C	Mech. Eng	Longview.
Eberspacher, R	Mech. Eng	College Station.
Eichblatt, O. H	Mech. Eng	Skidmore.
Elrod, H	Mech. Eng	Columbus.
Fehrenkamp, E. B	Mech. Eng	Frelsburg.
Fewel, E. D	Mech. Eng	El Paso.
Field, J. E. E	Mech. Eng	Dallas.
Fitch, S. W	Mech. Eng	Alice.
Fountain, S	Civ. Eng	Bryan.
Fountain, T	Civ. Eng	Bryan.
Garbade, W. T	Agr	Witting.
Gardner, C. E	Mech. Eng	Bellville.
Garnett, R. M	Mech. Eng	Denton.
Garrett, T. H	Civ. Eng	Stranger.
Garrett, W	Mech. Eng	Stranger.
Garth, T. G	Mech. Eng	Bryan.
Gebhart, P. C	Agr	Dallas.

Name.	Course.	Residence.
Green, E. H	Civ. Eng	Yoakum.
Greeves, W. B	Mech. Eng	Beaumont.
Haberzettle, F. S	Mech. Eng	Fort Worth.
Hammond, E. C	Civ. Eng	Kosse.
Hann, G. S	Mech. Eng	Denton.
Harrison, W. P	Agr	Bedias.
Heffner, H. M	Mech. Eng	Houston.
Heierman, D. H	Mech. Eng	Austin.
Heierman, E. K	Mech. Eng	Austin.
Helberg, W	Mech. Eng	Houston.
Henderson, L. L	Agr	Van Alstyne.
Holcomb, R	Mech. Eng	Cisco.
Holman, S. B	Mech. Eng	La Grange.
Holmes, J. R., Jr	Mech. Eng	Galveston.
Hooper, J. J	Agr	Houston.
Holt, O. C	Agr	Lockhart.
Holzman, F. R	Agr	Industry.
Hoskins, O. W	Mech. Eng	Denton.
Huffhines, E	Agr	Dallas.
Hughes, A	Mech. Eng	Austin.
Hunter, E. P	Mech. Eng	Huntsville.
Hurst, Guy	Agr	Hunt.
Hyde, W. W	Mech. Eng	Taylor.
Jewell, T. W	Mech. Eng	Graham.
Kelly, J. W	Civ. Eng	Brownsville.
Kendall, E. L	Mech. Eng	Chambersville.
Kildow, P. G	Mech. Eng	Iowa Park.
Kleinsmith, M	Mech. Eng	Luling.
Korff, A	Agr	Shelby.
Larkin, W. J	Agr	Texarkana.
Leckie, A. R	Mech. Eng	Runge.
Lineberger, W. F	Agr	Bartlett.
Loftin, J	Mech. Eng	Tyler.
Louwien, A	Civ. Eng	Bellville.
McConnico, S. F	Agr	Bryan.
McKain, A. S	Civ. Eng	Wills Point.
McNeill, L. J	Mech. Eng	Brazoria.
Morris, L	Mech. Eng	Corpus Christi.
Moser, A. C	Agr	Dallas.
Muenster, J. H	Mech. Eng	Luling.
Myers, W. H	Mech. Eng	Housley.
Nance, E. P	Agr	Kyle.
Oliphant, L. E	Civ. Eng	Austin.
O'Rourke, H. E	Mech. Eng	Smithville.
Orr, J. A	Agr	Milford.
Pinson, T. J	Mech. Eng	Forney.
Powell, C. C	Mech. Eng	Bartlett.
Powell, E. H	Mech. Eng	Bartlett.
Raphael, H. R	Agr	Houston.
Reardon, E. M., Jr	Agr	Dallas.

Name.	Course.	Residence.
Robinson, A. D	Mech. Eng	Bryan.
Robinson, A. P	Mech. Eng	Austin.
Rust, W. M., Jr	Mech. Eng	Seguin.
Saunders, J	Civ. Eng	Conroe.
Schultz, C. E	Mech. Eng	Trinity.
Shaw, L. D	Civ. Eng	Columbus.
Shea, John, Jr	Mech. Eng	Belton.
Sholars, O. L	Agr	Orange.
Simpson, J. H	Mech. Eng	Hallettsville.
Smith, A. D	Civ. Eng	Fort Worth.
Smith, T. M	Agr	Columbia.
Spiller, J. L	Civ. Eng	Jacksboro.
Springstun, C. E	Civ. Eng	San Angelo.
Stafford, W. M	Civ. Eng	Victoria.
Stasny, H. F	Mech. Eng	College Station.
Storey, A. E	Agr	Lockhart.
Talbot, J. A	Civ. Eng	Texarkana.
Tanner, John	Mech. Eng	Columbus.
Taylor, Chester	Civ. Eng	Haynesville, La.
Taylor, L. N	Agr	Howard.
Thanheiser, C. A	Civ. Eng	Fayetteville.
Thomas, E. E	Mech. Eng	Shepherd.
Thomas, M. F	Mech. Eng	Clay.
Walker, E	Civ. Eng	Paris.
Weatherly, C. L	Mech. Eng	Grapevine.
Weston, D. C	Mech. Eng	Hempstead.
White, A	Mech. Eng	Houston.
Whittle, J. L	Mech. Eng	Sulphur Springs.
Williams, A. C	Civ. Eng	Harvey.
Williams, J. B	Mech. Eng	Paris.
Willoughby, Paul	Agr	Brady.
Winkler, C	Agr	The Grove.
Wittman, J. E	Mech. Eng	Bryan.
Wren, M. M	Agr	San Marcos.
Wyse, Ira O	Agr	Bryan.
Yarbrough, R. W	Mech. Eng	Greening, La.

FOURTH CLASS.

Name.	Residence.
Bailey, A. R	Colorado.
Barham, B. G	Clay.
Baugh, Mark	Sonora.
Beal, A. S	Colorado.
Becker, Dan C	Brenham.
Becker, E. S	Brenham.
Becker, Herbert, Jr	Brenham.
Blanchette, H. L	Beaumont.
Bland, H. F	Paris.
Blankinship, H. A	Cade.
Boothe, A. A	Cleveland.

Name.	Residence.
Brazelton, Geo. A	Waco.
Brann, A. D	Fort Worth.
Brashear, L. F., Jr	Hearne.
Brin, Roy	Ennis.
Briscoe, Mason	Foster.
Brooks, H. C	San Angelo.
Brown, Collins S	Corsicana.
Burch, M. W	Aurora.
Burkey, Henry	Galveston.
Carpenter, M. M	Sour Lake.
Charske, Woody	Houston.
Cleveland, Geo. W., Jr	Houston.
Colwick, E. T	Norse.
Cook, David L	Quinlan.
Coultas, Alva	Merritt, Ill.
Cruse, Ad V	Keno.
Darlington, B. L	Manor.
Davis, Tom	Iredell.
Dillon, T. H	Eagle Pass.
Doss, Henry	Colorado.
Downs, W. F	Temple.
Dwyer, Chas	Smithville.
Eastland, H. J	Dallas.
Eddins, C. R	Stranger.
Eidson, J. R	Hamilton.
Fearis, D. P	Ennis.
Flinn, C. N	San Antonio.
Forres, Henry, Jr	Schulenburg.
Foster, Henry	College Station.
Foster, W. D	College Station.
Gillespie, Ed	Manor.
Girand, A. M	Abilene.
Goss, W. R., Jr	Foster.
Graves, Jesse	Rockett.
Griswold, H. H	Galveston.
Hackbarth, Henry	Sealy.
Hall, Freman	Dallas.
Harrell, Campbell	Killeen.
Harris, J. H	Wills Point.
Harrison, Jerome	College Station.
Hawkins, Meek	Courtney.
Hayfort, Jesse W	Houston.
Hebert, E. B	Beaumont.
Henderson, Joe	Dallas.
Henry, Arthur	Ellinger.
Herrman, E. H	Geronimo.
Hoffman, J. H	Breslau.
Hollingsworth, S	Ellsworth.
Horton, C. M	Hamilton.
Hurst, Anist	Hunt.

Name.	Residence.
Hyde, A. V	Taylor.
Iglehart, Frank A	Austin.
Jeffress, E. C	Colorado.
Johnson, Homer	Paris.
Johnston, Arthur	Eureka.
Jones, F. S	Victoria.
Keown, W. L	Waco.
Kerr, Robt. C	Houston.
Kloss, Emil	Millheim.
Kophal, Will H	Waco.
Kroschel, F. M	Hallettsville.
Lauderdale, R. S	Galveston.
Law, F. F	Mansfield, La.
Lawther, P. W	Dallas.
Lerblance, Frank	Chicotah, I. T.
Lewenthal, J. A	Palestine.
Lewis, J. A	Forney.
Luhn, F. R	Brenham.
McAfee, C. A	Shreveport Junc'n.
McDonald, Walter	Sonora.
McGraw, Austin	Dallas.
McKain, E. B	Wills Point.
Marcus, Abe	Wichita Falls.
Matula, Chas	Schulenburg.
Mayfield, J. J	Longview.
Meusebach, Iago	San Antonio.
Meyer, Henry	Ellinger.
Mitchell, D. E	Kyle.
Mitchell, F. C	Guion.
Moore, Guy	DeKalb.
Myers, R. L	Josephine.
Nash, John	Waxahachie.
Neff, A. J	Donelton.
Nolen, B. E	Palestine.
Norman, John E	Graham.
Olds, T. H	New Braunfels.
Oualline, E. A	Tharp.
Oualline, Peter F	Tharp.
Oxsheer, F. G., Jr	Fort Worth.
Potthast, C. H	Weimar.
Priest, F. M	Rusk.
Putegnat, Frank	Brownsville.
Raysor, J. L	Chappell Hill.
Reese, Kinion	Sempronius.
Riggs, H. S	Merritt, Ill.
Roberts, H. G	Celina.
Rothe, F	D'Hanis.
Rougagnac, John F	Houston.
Rugely, D	Belton.
Russek, E	Schulenburg.

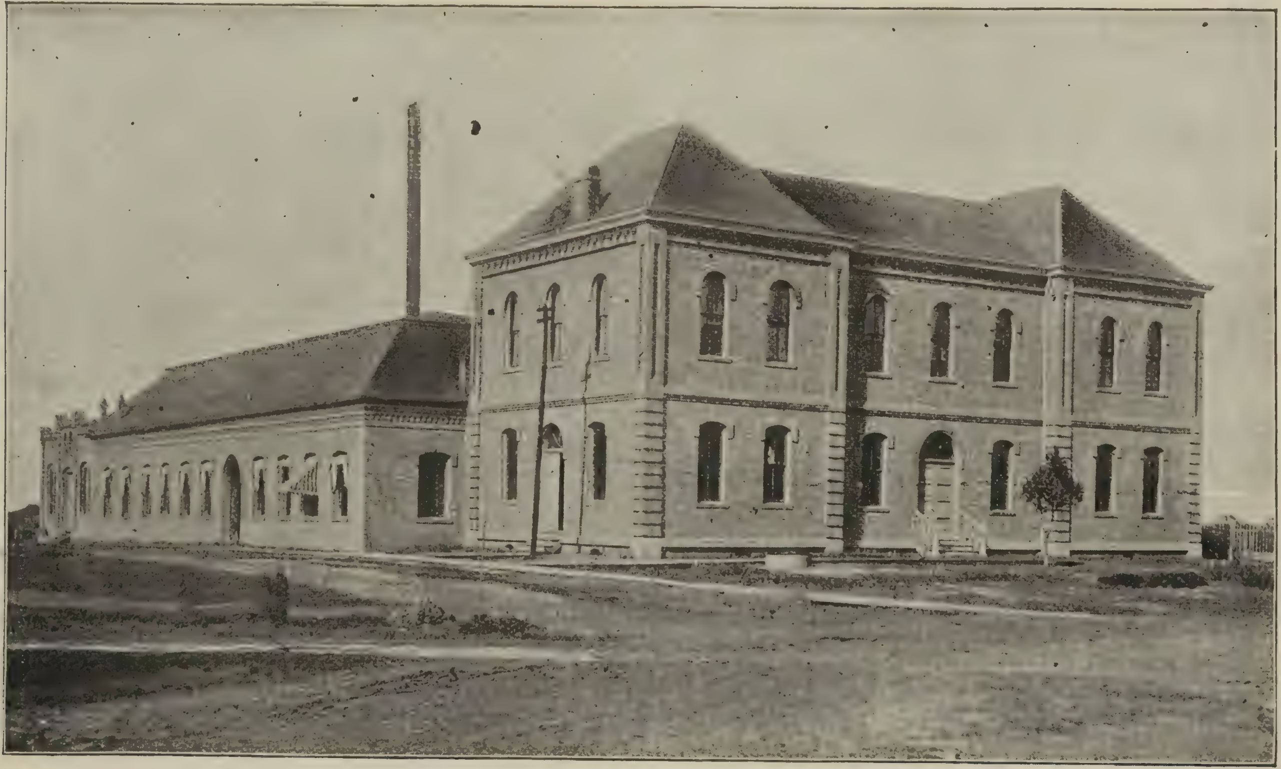
Name.	Residence.
Savage, James	Dryden.
Smith, Elijah	Somerset.
Sneed, W. N., Jr	Fairfield.
Snow, J. P	San Angelo.
Strieber, C. A	Yorktown.
Thompson, T. E	Wills Point.
Tucker, Chas. F., Jr	Dallas.
Turner, Ellis A	Sartartia.
Van der Stucken, Eugene	Fredericksburg.
Vidaurri, A. R	Laredo.
Waskom, J. B., Jr	Blocker.
Weinert, Arthur	Seguin.
Wheeler, C. S	Manor.
White, C. F	Brady.
Williams, J. H	Texarkana.
Williamson, J. R., Jr	Brenham.
Williamson, L. B	Lockhart.
Winter, Sol	Texarkana.
Wright, W. J	Kirbyville.
Wristen, C. M	Abilene.
Zak, Jas. F	Welborn.
Zeiss, Reuben C	Waller.
Zimmerman, R. C	Dot.

ELECTIVE COURSES.

Name.	Residence.
Burke, R. E	Bonham.
Clark, R. H	Tyler.
Cummings, R. D	Clay.
Harrison, C. C	Bedias.
Hollingsworth, H. V	Ellsworth.
Kennon, W. H	Columbus.
Law, J. O	Mansfield, La.
Prell, T. W	Brazoria.
Simon, R. C	College Station.
Smith, Ira T	Weatherford.
Thompson, C. A	Abilene.
Wilkins, L. T	Brenham.

SUMMARY.

Post Graduates	4
First Class	24
Second Class	48
Third Class	134
Fourth Class	134
Students in Elective Courses	12
Total	356



Mechanical Engineering Building.

OBJECTS AND POLICY.

The act of Congress which established the State Agricultural and Mechanical Colleges defines their objects, but under the act there have been founded as many different schools as there are States. These institutions have presented a variety of educational schemes, which have embraced nearly all gradations, from the classical and mathematical college to the manual labor industrial school. In view of this fact, it is proper to state as definitely as possible the interpretation given to the act of Congress by the authorities of this College, and the manner in which they are endeavoring to carry out its provisions.

This College proposes to equip young men for their future career by the development of their powers with reference to the wants of life, and to impress upon them the dignity, the nobility, and the duty of labor.

There is in our State a great field and a growing demand for the services of those fitted for work in every branch of applied science, and we are now compelled to draw upon other States to fill the most lucrative, honorable, and important positions in every industrial enterprise.

It is proposed to meet these conditions by offering our young men the opportunity to obtain that education and training which will fit them to take a leading part in the material development of the State; to become scientific farmers and horticulturists, familiar with the properties and needs of soils, the laws of plant growth, the principles of breeding, and, in general, with rational methods based on the revelations of modern science; to become mechanical engineers, draughtsmen, chemists, civil engineers, competent to fill responsible positions in these callings—men fitted not only to meet demands made upon them, but to create such demand by pointing the way to progress and development.

Care is taken, also, that the student, while engaged in such special studies, shall give a due part of his time to those more general forms of knowledge which are essential to a liberal education and mark the well-informed citizen in every walk of life.

The military feature is an important adjunct to the other work of the College. It is conducive to health and to bodily grace and strength, and cultivates habits of strict attention and of obedience, punctuality, neatness, regularity.

METHOD AND SCOPE OF INSTRUCTION.

The courses of instruction are designed in accordance with the above outline of objects and policy. In all of them the fundamental idea is education in practical science, particularly in agriculture, in horticulture, in mechanical engineering, and in civil engineering. With this idea in view, instruction is given in English and history, physical geography, mathematics, foreign languages, physics, chemistry, and in other studies which lie at the foundation of a sound education and furnish the best preparation for the more technical studies of the several courses. Instruction is given by the use of text-books, by lectures and recitations; also, by practice in shop, field, laboratory, and drawing room. These practical exercises have a high educational value, and serve a useful purpose in fixing and rendering clear the ideas presented in the class room; they have also a practical value, for they are, in great measure, examples of just such problems as the scientific agriculturist, or engineer, will encounter in the pursuit of his calling. For convenience of instruction, the classes are subdivided into sections of suitable size. There are written examinations at such intervals as may be deemed best.

INFORMATION CONCERNING ADMISSION.

REQUIREMENTS FOR ADMISSION.

To enter the College, an applicant must be at least fifteen years old. He must be free from contagious or infectious disease, or any deformity that would unfit him for the performance of his duties as a student of the College. He may be required to furnish evidence that he has not been dismissed from another institution of learning, and that his moral character is good.

The mental attainments necessary for entering the Fourth Class comprise a knowledge of arithmetic, of geography, of elementary English grammar and composition, and of the History of Texas.

Applicants for the Third Class will be required to pass a satisfactory examination on the mathematics, English, history, and physical geography studied by the Fourth Class, and to make up book No. 5 of Thompson's Freehand Drawing.

Applicants for the Second Class will be required to pass a similar examination on the mathematics and English, history, and physical geography of the Fourth Class, and on all the subjects studied by the Third Class in the course desired, but they may be admitted conditionally if they fail in not more than three subjects, equivalent, together, to eight hours per week for one term.

The above requirements apply to candidates for admission at the opening of the session. Those who come later will be examined, also, upon the work already gone over by the class they propose to enter.

Graduates of schools approved by the Faculty will be admitted on diploma or certificate at the beginning of the session without examination. They must, however, conform to the requirements in regard to age and physical development stated above; and must present their diplomas within fifteen months after they are issued. For a list of affiliated schools see page 72.

Upon consent of the President, young men eighteen years of age, or over, will be admitted to the Fourth Class without examination, provided they present themselves during the first week of the session.

SPECIMEN ENTRANCE EXAMINATIONS.

Special attention is called to the following specimen entrance examinations. Young men intending to apply for admission are urged to satisfy themselves by actual trial before coming to College that they can answer such questions.

ENTRANCE EXAMINATIONS FOR FOURTH CLASS.

Arithmetic (Sutton and Kimbrough's Higher Book, or the equivalent).

1. Reduce to fractions having the least common denominator $\frac{5}{12}$, $\frac{9}{14}$, $\frac{8}{77}$.
2. From $84\frac{1}{3}$ subtract $49\frac{7}{8}$.
3. Divide $17\frac{1}{3}$ by $2\frac{4}{7}$ and multiply the quotient by $5\frac{2}{9}$.
4. Reduce to a simple fraction $\dfrac{8\frac{2}{3}-5\frac{7}{8}.}{3\frac{3}{4}\times 4\frac{1}{3}.}$
5. If $\frac{2}{3}$ of a farm is worth $7200 what is the whole farm worth?
6. Reduce to decimals and add $\frac{4}{5}$, $\frac{9}{25}$, $\frac{5}{16}$, $\frac{3}{80}$.
7. Multiply 361.24 by 3.256 and divide the product by 81.4.
8. What will 7 bu. 3 pk. 4 qt. nuts cost at $1.20 per peck?
9. The population of a county grew from 15,800 to 18, 012; what was the increase *per cent?*

10. If by selling land at $36 per acre I lose 25%, at what price should I sell it in order to gain 40%?

11. What per cent. on the investment is yielded when 6% bonds are bought at 120?

12. Find the interest at 8% on $425 for 2 yrs. 5 mos. 18 days.

13. How long must $450 remain at interest at 6% in order to yield $94.50 interest?

14. A. B. and C. engage in trade, A. investing $840, B. $760, and C. $1200; the profits amount to $560; what should be the share of each?

15. What is meant by a centimeter?

English and History.

1. Spell correctly: yot, hawty, cawt, acheev, seej, hite, plite, ake, pleez, frawt.

2. In what country are: Dresden, Moscow, Teheran, Bogota, Honolulu, Austin, Barcelona, Dieppe, Quebec, Madras, Khartoum, Liverpool?

3. Where are the Alps, the Andes, the Himalayas, the Pyrenees, the Altais, the Carpathians, the Cordilleras, the Rockies, the Urals, the Grampians?

4. Where are the Ladrones, the Philippines, the Azores, the Canaries, the Faroes, the Hebrides, the Cyclades, the Seychelles, the Mascarenes, the Bahamas?

5. What countries own Alaska, Cape Colony, Algeria, Puerto Rico, Java, Jamaica, New Zealand, Curacao, Ceylon, Burmah?

6. State the causes of the Texan Declaration of Independence.

7. State how and where fell Ben Milam, Travis, Bowie, Crockett, Fannin.

8. What battles of the war between the United States and Mexico were fought on the soil of Texas?

9. Who was Governor of Texas at the time of her secession from the United States?

10. Write the progressive form of *walk,* indicative past.

11. Write the emphatic form of *walk,* indicative present.

12. Write a sentence containing a participial phrase.

13. Write a sentence containing an adverbial clause.

14. Write a sentence containing an attributive complement, noun.

15. Write a sentence containing an attributive complement, adjective.

16. Write a sentence containing an adjective clause.

17. "That the cause is lost cannot be denied." State the subject.

18. "That the cause is lost all men know." State the subject.

19. "That the cause is lost all men know." State the object.

20. Write a brief composition on "The Resources of Texas."

ENTRANCE EXAMINATIONS FOR THIRD CLASS.

Arithmetic. (Same as for Fourth Class.)

Algebra.

1. Multiply $6x^4-3x^3-x^2+6x-2$ by $3x^2-5x-2$.

2. Divide $5x^4-14x^3y+31x^2y^2-22xy^3+12y^4$ by $5x^2-4xy+3y^2$.

3. Find the factors, the highest common factor and the lowest common multiple of a^2-b^2, $a^3+2a^2b+b^2$ and a^3+b^3.

4. Simplify $\frac{2}{x}-\frac{3}{2x-1}-\frac{2x-3}{4x^2-1}$

5. Divide $\frac{x^3-25x}{x^2+x-6}$ by $\frac{x^2-5x}{x^2-4x-28}$

6. Solve the equation; $2-\frac{7x-1}{6}=3x-\frac{19x+3}{4}$

English and History.

1. Name the original thirteen Colonies.

2. In what wars were they engaged as colonies?

3. What were the causes of the Revolutionary War? Name its chief battles.

4. In what wars were the people of the United States engaged between this time and the Civil War?

5. What British general fell at the battle of New Orleans? Who led the Americans?

6. Name the chief battles of the war between the United States and Mexico.

7. In what battle did Stonewall Jackson fall?

8. Who commanded the Alabama?

9. Spell correctly: etherial insepperubble, nessiserrily, stupify, eksillerate.

10. Write a sentence containing both an adjective and an adverbial clause.

11. Write a sentence containing an adjective clause used as part of the complement.

12. Write a sentence containing an adverbial clause, subordinate to a subordinate clause.

13. Write a sentence containing a subordinate clause, used as object.

14. "Rising from these elevated table-lands, the traveler will see lofty ranges of granite mountains." Correct this.

15. "He likes me better than you." Clear of ambiguity.

16. "The Judge of all the earth will do right." Change to interrogative form.

17. "Soft is the strain when zephyr gently blows." State the logical predicate.

18. "I was grieved when I heard how he had obtained the character that he bore." Analyze, stating relation of subordinate clauses.

19. "That the cause is lost cannot be denied." State subject.

20. Write a brief composition on "Home Pleasures."

Physical Geography.

1. What is the Nebular Theory?
2. Mention the evidences of internal heat of the earth.
3. What are the causes of earthquakes? Of volcanoes? Name the volcanic belts.
4. What are the physical properties of water?
5. Give the theory of tides.
6. Explain the laws of storms.
7. How do rivers change the surface of the earth?
8. Name the classes of islands, and explain the formation of each class.
9. Name the leading characteristics of the great divisions of mankind.
10. Draw a physical map of North America, indicating thereon the principal rivers, lakes, and mountains.

MATRICULATION.

Upon arrival at the College, young men intending to enter will report as soon as possible to the President of the College. From him they will go to the several professors for examination and enrollment in classes, and to the Commandant for assignment to company and quarters.

Upon matriculation, every student shall sign the following pledge: "I promise to obey the constituted authorities of this College, and to support good order and discipline. I certify that I have in my possession no firearms or other deadly weapons."

Firearms or other deadly weapons brought to the College by students shall be deposited with the President.

EXPENSES FOR SESSION OF NINE MONTHS.

Trust fund, payable on entrance	$ 5 00
Incidental fee, payable on entrance	5 00
Physician's fee, payable on entrance	5 00
Maintenance, Fall Term, payable September 13	50 00
Maintenance, Winter Term, payable January 3	35 00
Maintenance, Spring Term, payable March 15	40 00
Total	$140 00

The trust fund is to pay for property damaged or destroyed, and will be refunded if there is no charge of this kind against the student.

Incidental and physician's fees will in no case be refunded.

Maintenance includes board, fuel, washing, lights, room rent, single bedsteads, mattresses, pillows, tables, washstands, chairs, buckets, basins and slop cans, all of which the College furnishes.

Each student is required to bring with him and keep on hand two pairs of sheets, two pillow cases, two blankets, one comfort, one-half dozen towels, and underclothing sufficient for one year's wear. For winter, he should provide himself with an overcoat or mackintosh.

Students are required to take their meals at the Mess Hall.

Payment for each term must be made in advance, but a student entering during a term will be charged maintenance for the remainder of that term only.

A student once entering for the term, and having paid for that term, or the balance of it, as required by the resolution of the Board of Directors, shall forfeit all claim to said payment in case of voluntary withdrawal from the College before the expiration of said term, except in case of sickness disqualifying him for the discharge of his duties for the rest of the term.

Expenses of a graduate student will be $15 for material used in laboratories and practical work, and $5 for physician's fees, with charge for maintenance as above. Day students pay $15, as trust fund, incidental fee, and physician's fee, as above.

If on any account the prompt payment of the dues should be delayed, the President will mail to the parent or guardian of the student the following notice:

NOTICE TO PARENTS AND GUARDIANS.

"Your attention is respectfully directed to the following resolution passed by the Board of Directors of the Agricultural and Mechanical College of Texas:

'*Resolved,* That it shall be the duty of the Treasurer to notify parents and guardians, ten days after the date upon which a term payment is due, that if same is not paid within twenty days thereafter (thirty days from time the payment was due), the student so in arrears will be dismissed.

'Payment due ....18.. Notice sent...........18..
'Limit expires............18'

"All communications in reference to accounts of students should be addressed to the President of the College."

HORTICULTURAL COURSE.

The object of the Horticultural course is to prepare the student to engage in the highest development of the horticultural industry. He is taught how to propagate the various plants; to plan, set, cultivate and manage orchards, vineyards and gardens to best advantage. How to bring contentment and happiness to the homes of rural lives by the cultivation of trees, shrubbery, flowers, and grass, is considered. The knowledge of botany enables the student to understand the laws of plant growth. The knowledge of entomology enables the student to prevent injury done to plants by injurious insects. In order to give the student a well rounded education, allied sciences, such as mathematics, chemistry, veterinary science, English, physics, and German or Latin, are taught.

MECHANICAL COURSE.

The object of the course in Mechanical Engineering is to educate the student not merely to become a mechanic, but also to enable him to take charge of men and tools, erect machinery, lay out plans, etc., with the minimum amount of further preparation. This necessitates a study not only of engineering problems, but also demands a broad foundation of useful knowledge, and a training which leads as much as possible to originality in thought and quick perception of the objects sought. With this in view, the subjects studied in this course are carefully selected.

CIVIL ENGINEERING COURSE.

This course is intended to prepare young men for entrance upon professional practice and advanced study in some of the many branches included in the scope of Civil Engineering; to enable the graduate to survey and map areas; to locate, construct and maintain highways, railroads, streets, pavements, water-works systems, sewerage systems, canals, dams, irrigation ditches, bridges, and other structures; to become draughtsmen; and, in fact, to enter upon the advanced study necessary for almost any one of the special lines embraced in the work of the Civil Engineer.

Gathright Hall

CURRICULA.

The subjects embraced in these courses are shown in detail on the following pages; the numerals indicate the number of hours per week; practice and work are indicated by *italics*. The numerals in parenthesis indicate the totals in recitations, and in practice and work.

For list of text-books see page 34.

FOR ALL COURSES, FOURTH CLASS.

FALL TERM.	
Algebra	5
English	5
History	5
Physical Geography	(19)-4
Carpentry Practice	4
Physical Geography	2
Book-keeping and Penmanship	3
Infantry Drill	(12)-3

WINTER TERM.	
Algebra	5
English	5
History	(15)-5
Carpentry Practice	4
Physical Geography	2
Book-keeping	3
Free-hand Drawing	1½
Infantry Drill	(10½)-1½

SPRING TERM.	
Algebra	5
English	5
History	(15)-5
Book-keeping	3
Carpentry Practice	4
Nature Study	2
Free-hand Drawing	1½
Infantry Drill	(13½)-3

AGRICULTURAL COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
Elementary Agriculture	2
Botany and Fruit Culture	4
Physics	(20)-4
Milk Testing	2½
Budding and Grafting	2½
Free-hand Drawing	1½
Infantry Drill	(9½)-3

WINTER TERM.

Geometry	5
English and History	5
Breeds of Stock	4
Physics	3
Physiology	(20)-3
Soil Physics	2½
Budding and Grafting	2½
Free-hand Drawing	(6½)-1½

SPRING TERM.

Geometry	5
English and History	5
Agricultural Grasses	3
Vegetable Culture	2
Systematic Botany	(19)-4
Field Crops	2½
Garden Practice	2½
Free-hand Drawing	1½
Mechanical Drawing	1½
Infantry Drill	(11)-3

HORTICULTURAL COURSE.

THIRD CLASS.

FALL TERM.

Algebra	5
English and History	5
Elementary Agriculture	2
Botany and Fruit Culture	4
Physics	(20)-4
Milk Testing	2½
Budding and Grafting	2½
Free-hand Drawing	1½
Infantry Drill	(9½)-3

WINTER TERM.

Geometry	5
English and History	5
Breeds of Stock	4
Physics	3
Physiology	(20)-3
Soil Physics	2½
Budding and Grafting	2½
Free-hand Drawing	(6½)-1½

SPRING TERM.

Geometry	5
English and History	5
Agricultural Grasses	3
Vegetable Culture	2
Systematic Botany	(19)-4
Field Crops	2½
Garden Practice	2½
Free-hand Drawing	1½
Mechanical Drawing	1½
Infantry Drill	(11)-3

MECHANICAL ENGINEERING COURSE.

Third Class.

FALL TERM.

Algebra	5
English and History	5
M. E. Lectures	2
Physics	(16)-4
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	2½
Infantry Drill	(11½)-3

WINTER TERM.

Algebra	2
Geometry	5
English and History	5
Steam Engine	3
Physics	(18)-3
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	(8½)-2½

SPRING TERM.

Algebra	2
Geometry	5
English and History	5
Steam Engine	3
Electricity and Magnetism	(18)-3
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	2½
Infantry Drill	(11½)-3

CIVIL ENGINEERING COURSE.

Third Class.

FALL TERM.

Algebra	5
English and History	5
M. E. Lectures	2
Physics	(16)-4
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	2½
Infantry Drill	(11½)-3

WINTER TERM.

Algebra	2
Geometry	5
English and History	5
Physics	4
German or French	(18)-2
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	(8½)-2½

SPRING TERM.

Algebra	2
Geometry	5
English and History	5
Road Making	2
Electricity and Magnetism	3
German or French	(18)-2
Shop Practice	5
Free-hand Drawing	1
Mechanical Drawing	2½
Infantry Drill	(11½)-3

AGRICULTURAL COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry	3
Principles of Breeding Live Stock	5
Entomology	2
Systematic Botany	1
Inorganic Chemistry	4
Veterinary Medicine	(17)-2
Stock Judging	2½
Entomology	2
Analytical Chemistry	2½
Infantry Drill	(10½)-3

WINTER TERM.

Trigonometry	4
English	4
Dairying	2
Inorganic Chemistry	4
Veterinary Medicine	2
Drill Regulations	(18)-2
Cheese Making	5
Analytical Chemistry	(10)-5

SPRING TERM.

Algebra	4
History	2
Dairying	2
Irrigation and Drainage	3
Organic Chemistry	4
Surveying	(18)-3
Irrigation	2½
Analytical Chemistry	5
Surveying	——
Zoology	2
Infantry and Artillery Drill,	(12½)-3

HORTICULTURAL COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry	3
Histological Botany	3
Systematic Botany	1
Entomology	2
Inorganic Chemistry	4
Veterinary Medicine	2
German or Latin	(18)-3
Horticultural Practice	5
Analytical Chemistry	2½
Entomology	2
Infantry Drill	(12½)-3

WINTER TERM.

Trigonometry	4
English	4
Inorganic Chemistry	4
Veterinary Medicine	2
German or Latin	3
Drill Regulations	(19)-2
Botany	2½
Analytical Chemistry	(7½)-5

SPRING TERM.

Algebra	4
History	2
Small Fruit Culture	3
Organic Chemistry	4
German or Latin	3
Surveying	(19)-3
Horticulture	2½
Analytical Chemistry	5
Surveying	——
Zoology	2
Infantry and Artillery Drill,	(12½)-3

MECHANICAL ENGINEERING COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry..	5
Slide Valve	4
Inorganic Chemistry	4
Descriptive Geometry	(18)-5
Shop Practice	5
Mechanical Drawing	4
Infantry Drill	(12)-3

WINTER TERM.

Trigonometry	4
English	4
Graphics	4
Inorganic Chemistry	4
Drill Regulations	(18)-2
Shop Practice	5
Mechanical Drawing	(9)-4

SPRING TERM.

Algebra	5
History	2
Machine Design	4
Metallurgy	4
Kinematic Drawing	1
Surveying	(19)-3
Shop Practice	5
Mechanical Drawing	4
Surveying	——
Infantry and Artillery Drill,	(12)-3

CIVIL ENGINEERING COURSE.

Second Class.

FALL TERM.

Geometry and Trigonometry..	5
Sewers and Drains.........	2
Inorganic Chemistry	4
Descriptive Geometry	5
German or French	(19)-3
Shop Practice	5
Mechanical Drawing	4
Infantry Drill	(12)-3

WINTER TERM.

Trigonometry	4
English	4
Surveying	2
Inorganic Chemistry	4
German or French	3
Drill Regulations	(19)-2
Shop Practice	5
Mechanical Drawing	(9)-4

SPRING TERM.

Algebra	5
History	2
Plane and Railroad Surveying.	5
Geology	3
German or French.........	(18)-3
Shop Practice	5
Mechanical Drawing	4
Surveying	——
Infantry and Artillery Drill,	(12)-3

AGRICULTURAL COURSE.

FIRST CLASS.

FALL TERM.

English	4
Feeding Animals	5
Industrial Chemistry	4
Veterinary Surgery	(16)-3
Stock Feeding	2½
Analytical Chemistry	4
Veterinary Practice	2
Infantry Drill	(11½)-3

WINTER TERM.

Feeding Animals	5
Landscape Gardening	1
Forestry	2
Agricultural Chemistry	5
Veterinary Surgery	3
Military Science Lectures	(17)-1
Stock Feeding	5
Analytical Chemistry	2½
Dissecting	(12½)-5

SPRING TERM.

History	2
Farm Management	5
Injurious Insects	2
Geology	4
Veterinary Surgery	(16)-3
Plant Life	5
Analytical Chemistry	2½
Veterinary Practice	2½
Infantry and Artillery Drill	(13)-3
Thesis.	

HORTICULTURAL COURSE.

FIRST CLASS.

FALL TERM.

English	4
Viticulture and Nut Culture.	2
Fungi and Plant Diseases	2
Industrial Chemistry	4
Veterinary Surgery	3
German or Latin	(18)-3
Botany	5
Analytical Chemistry	4
Veterinary Practice	2
Infantry Drill	(14)-3

WINTER TERM.

Forestry	2
Landscape Gardening	1
Agricultural Chemistry	5
Veterinary Surgery	3
German or Latin	3
Military Science Lectures	(15)-1
Horticulture	5
Analytical Chemistry	2½
Dissecting	(12½)-5

SPRING TERM.

History	2
Plant Variation and Breeding	2
Injurious Insects	2
Geology	4
Spraying of Plants	2
Veterinary Surgery	3
German or Latin	(18)-3
Horticulture	5
Analytical Chemistry	2½
Veterinary Practice	2½
Infantry and Artillery Drill	(13)-3
Thesis.	

MECHANICAL ENGINEERING COURSE.

First Class.

FALL TERM.

Analytical Geometry, Mechanics	5
English	4
Machine Design	5
Metallurgy	(18)-4
Shop Practice	5
Metallurgy	2
Mechanical Drawing	4
Infantry Drill	(14)-3

WINTER TERM.

Analytical Geometry, Calculus	5
Mechanical Engineering	5
Metallurgy	3
Strength of Materials	4
Military Science Lectures	(18)-1
Experimental Work in Engineering	5
Metallurgy	2
Mechanical Drawing	(11)-4

SPRING TERM.

Calculus	5
History	2
Mechanical Engineering	7
Strength of Materials	(15)-3
Experimental Work in Engineering	5
Metallurgy	2
Mechanical Drawing	2½
Infantry and Artillery Drill.	(12½) 3

Thesis.

CIVIL ENGINEERING COURSE.

First Class.

FALL TERM.

Analytical Geometry, Mechanics	5
English	4
Railroad Engineering	5
Hydraulics	2
German or French	(19)-3
Civil Engineering	5
Mechanical Drawing	5
Infantry Drill	(13)-3

WINTER TERM.

Analytical Geometry, Calculus	5
Mechanics of Materials, Roofs and Bridges	5
Hydraulics	4
German or French	3
Military Science Lectures	(18)-1
Analytical Chemistry	5
Mechanical Drawing	(10)-5

SPRING TERM.

Calculus	5
History	2
Roofs and Bridges	6
German or French	(16)-3
Testing, Designing and Field Practice	7½
Mechanical Drawing	2½
Infantry and Artillery Drill.	(13)-3

Thesis.

TEXT-BOOKS.

FOURTH CLASS.

AGRICULTURE: Physical Geography, *Maury.*

DRAWING: Bookkeeping, *The Ellis System.* Drawing, *Thompson.*

ENGLISH AND HISTORY: Advanced Grammar, *Patterson;* Composition, *Chittenden;* United States History, *Lee;* American Literature, *Watkins.*

MATHEMATICS: Higher Algebra, *Wells.*

THIRD CLASS.

CIVIL ENGINEERING AND PHYSICS: Physics, *Carhart and Chute;* Electricity, *Thompson;* Roads, Streets, and Pavements, *Gillmore.*

DRAWING: Mechanical Drawing, *Anthony;* Freehand Drawing, *Thompson.*

ENGLISH AND HISTORY: Rhetoric, *Genung;* General History, *Myers.*

HORTICULTURE, BOTANY, AND ENTOMOLOGY: Truck Gardening South, *Oemler;* Fruit Culture, *Thomas; Wood's* Manual; Structural Botany, *Gray.*

MATHEMATICS: Algebra, *Wells;* Geometry, *Wentworth.*

MECHANICAL ENGINEERING: Steam Engine, *Kinealy.*

VETERINARY SCIENCE: Comparative Physiology, *Mills.*

SECOND CLASS.

AGRICULTURE: Milk and Its Products, *Wing.*

CHEMISTRY: Inorganic Chemistry, *Storer-Lindsay;* Organic Chemistry, *Remsen;* Blow Pipe Analysis, *Nason;* Qualitative Wet Analysis, *Miller;* Metallurgy, *Bloxam;* Geology, *Le Conte.*

CIVIL ENGINEERING AND PHYSICS: Surveying, *Davies, Raymond;* Sewers and Drains, *Adams;* Sewage Utilization, *Baker;* Field Manual for Railroad Engineers, *Nagle.*

DRAWING: Descriptive Geometry, *Faunce.*

ENGLISH AND HISTORY: English Language, *Meiklejohn;* History of England, *Buckley.*

LANGUAGES: German Grammar, *Joynes-Meissner;* Spanish Grammar, *De Tornos;* French Grammar, *Whitney;* Latin Grammar, *Coy, Gildersleeve;* Selected Readers and Literature.

HORTICULTURE, BOTANY, AND ENTOMOLOGY: Physiological Botany, *Vines;* Entomology, *Packard;* Small Fruit Culture, *Fuller.*

PRESIDENT'S RESIDENCE.

MATHEMATICS: Algebra, *Wells;* Geometry, *Wentworth;* Trigonometry, *Wells.*

MECHANICAL ENGINEERING: Graphics, *Merriman and Jacobi;* Slide Valve, *Halsey;* Machine Design, *Low and Bevis.*

MILITARY SCIENCE: Drill Regulations.

VETERINARY SCIENCE: Veterinary Medicine, *Robertson.*

FIRST CLASS.

AGRICULTURE: Feeds and Feeding, *Henry.*

CHEMISTRY: Agricultural Chemistry, *Storer;* Industrial Chemistry, *Sadtler;* Metallurgy, *Blount and Bloxam;* Geology, *Le Conte.*

CIVIL ENGINEERING AND PHYSICS: Field Manual for Railroad Engineering, *Nagle;* Mechanics of Materials, *Merriman;* Hydraulics, *Merriman;* Roofs and Bridges, Parts I and II, *Merriman and Jacoby;* Hand Book, *Carnegie.*

DRAWING: Strength of Materials, *Mather.*

ENGLISH AND HISTORY: History of England, *Buckley.*

HORTICULTURE, BOTANY, AND ENTOMOLOGY: Forestry, *Hough;* Viticulture, *Husman;* Landscape Gardening, *Long;* Plant Variation and Breeding, *Bailey;* Nut Culture, *Fuller;* Fungi and Plant Diseases, *Von Tubeuf;* Spraying of Plants, *Lodeman.*

LANGUAGES: German Grammar, *Joynes-Meissner;* German Prose, *Boisen;* Spanish Grammar, *De Tornos;* Latin Grammar, *Coy, Gildersleeve;* French Grammar, *Whitney.* Selected Readers and Literature.

MATHEMATICS: Analytical Geometry, *Nichols;* Elementary Mechanics, *Wood;* Practical Calculus, *Peck.*

MECHANICAL ENGINEERING: Machine Design, *Low and Bevis.*

MILITARY SCIENCE: United States Army Regulations.

VETERINARY SCIENCE: Veterinary Surgery, *Williams, Liautard:* Veterinary Anatomy, *Chauveau;* Materia Medica, *Bartholow,* Horse Shoeing, *Fleming;* Veterinary Obstetrics, *Fleming.*

SCHEDULE OF RECITATIONS.

In order to show definitely the manner in which the time of students is employed, the following schedule of daily work is appended.

Instructive work in the shops or laboratories is in this schedule designated as "practice." The large classes are, as necessity may arise, divided into sections which may recite or work in the several departments at the same time under different instructors.

FALL SCHEDULE, 1899.

FIRST CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	English	English	English	English	Latin.
8:50- 9:40	2	German	Latin	German	Latin	German.
9:40-10:30	3	Mathematics	Mathematics	Mathematics	Mathematics	Mathematics.
10:30-11:20	4	Metallurgy	Metallurgy	Metallurgy	Metallurgy	
10:30-11:20	4	Veterinary Surgery	Civil Engineering	Veterinary Surgery	Civil Engineering	Veterinary Surgery.
10:30-11:20	4	French		French		French.
11:20-12:10	5	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture.
11:20-12:10	5	Horticulture	Horticulture	Horticulture	Horticulture	
11:20-12:10	5	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering.
11:20-12:10	5	Civil Engineering	Civil Engineering	Civil Engineering	Civil Engineering	Civil Engineering.
12:10- 1:00	6		Chemistry	Chemistry	Chemistry	Chemistry.
2:00- 4:00		Chemical Practice		Chemical Practice	Veterinary Laboratory	
2:00- 4:00					Metallurgy	
2:00- 4:30		M. E. Practice	Agricultural Practice			M. E. Practice.
2:00- 4:30			Horticultural Practice			Horticultural Practice.
2:00- 4:30			Drawing	Drawing	C. E. Practice	C. E. Practice.
5:00- 6:00		Drill		Drill		Drill.

SECOND CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	French	German	French	German	German.
8:50- 9:40	2	Descriptive Geometry, 1	Descriptive Geometry, 1	Descriptive Geometry, 1	Descriptive Geometry, 1	Descriptive Geometry, 1.
8:50- 9:40	2	Descriptive Geometry, 2	Descriptive Geometry, 2	Descriptive Geometry, 2	Descriptive Geometry, 2	Descriptive Geometry, 2.
8:50- 9:40	2	Breeds of Stock	Breeds of Stock	Breeds of Stock	Breeds of Stock	Breeds of Stock.
9:40-10:30	3	Veterinary Medicine	Veterinary Medicine	Entomology	Entomology	Latin.
9:40-10:30	3		Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering.
9:40-10:30	3	Civil Engineering		Civil Engineering		
10:30-11:20	4	Botany	Latin	Botany	Botany	Botany.
10:30-11:20	4	Mathematics, 1	Mathematics, 1	Mathematics, 1	Mathematics, 1	Mathematics, 1.
10:30-11:20	4	Chemistry, 2	Chemistry, 2	Chemistry, 2	Chemistry, 2	Chemistry, 2.
11:20-12:10	5	Latin	Mathematics. 3	Mathematics, 3		Mathematics, 3.
11:20-12:10	5	Mathematics, 2	Mathematics, 2	Mathematics, 2	Mathematics, 2	Mathematics, 2.
12:10- 1:00	6	Chemistry, 1 and 3	Chemistry, 1 and 3	Chemistry, 1 and 3	Chemistry, 1 and 3	
2:00- 4:00				Entomology	Drawing	Drawing.
2:00- 4:30		Horticultural Practice	M. E. Practice	M. E. Practice	Horticultural Practice	
2:00- 4:30		Agricultural Practice				
5:00- 6:00		Drill		Drill		Drill.

FALL SCHEDULE, 1899.

THIRD CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	English, 4	English, 4	English, 4	English, 4	English, 4.
8:00- 8:50	1	Physics, 1	Physics, 1	Physics, 1	Physics, 1	
8:50- 9:40	2	English, 2	Engilsh, 2	English, 2	English, 2	English, 2.
8:50- 9:40	2	Physics, 3	Physics, 3	Physics, 3	Physics, 3	Mathematics, 3.
8:50- 9:40	2		Botany, A	Botany, A	Botany, A	Botany, A.
9:40-10:30	3	English, 1	English, 1	English, 1	English, 1	English, 1.
9:40-10:30	3	Mathematics, 2 and 3	Mathematics, 2 and 3	Mathematics, 2 and 3	Mathematics, 2 and 3	Mathematics, 2 and 3.
9:40-10:30	3	Physics, 4	Physics, 4	Physics, 4	Physics, 4	
10:30-11:20	4		M. E. Lectures, S1	M. E. Lectures, D1	M. E. Lectures, S1	M. E. Lectures, D1.
10:30-11:20	4	Mathematics, 4	Mathematics, 4	Mathematics, 4	Mathematics, 4	Mathematics, 4.
11:20-12:10	5		M. E. Lectures, S2	M. E. Lectures, D2	M. E. Lectures, S2	M. E. Lectures, D2
11:20-12:10	5	Drawing, D		Drawing, S		Free Hand Drawing.
11:20-12:10	5		Elementary Agriculture		Elementary Agriculture	
12:10- 1:00	6	English, 3	Euglish, 3	English, 3	English, 3	English, 3.
12:10- 1:00	6	Mathematics, 1	Mathematics, 1	Mathematics, 1	Mathematics, 1	Mathematics, 1.
12:10- 1:00	6	Physics, 2	Physics, 2	Physics, 2	Physics, 2	
12:10- 1:00	6	Botany, B	Botany, B	Botany, B	Botany, B	
2:00- 4:00		M. E. Practice	Drawing, D	Drawing, S	M. E. Practice	Wood Turning & B. S.
2:00- 4:30		Agricultural Practice			Agr. Practice, A	Agr. Practice, B.
2:00- 4:30				Hort. Practice, B,		Hort. Practice, A.
5:00- 6:00		Drill		Drill		Drill.

FOURTH CLASS.

HOURS.	Period.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8:00- 8:50	1	Mathematics, 2	Mathematics, 2	Mathematics, 2	Mathematics, 2	
8:00- 8:50	1	Physical Geography, 3	Physical Geography, 3	Physical Geography, 3	Physical Geography, 3	Writing 4.
8:00- 8:50	1	M. E. Practice, 1 and 4		M. E. Practice, 1 and 4		M. E. Practice, 2 and 3.
8:50- 9:40	2	M. E. Practice, 1 and 4		M. E. Practice, 1 and 4		M. E. Practice, 2 and 3.
8:50- 9:40	2	English, 2	English, 2	English, 2	English, 2	
8:50- 9:40	2	Mathematics, 3	Mathematics, 1 and 3	Mathematics, 1 and 3	Mathematics, 1 and 3	Mathematics, 1.
9:40-10:30	3	English, 1	English, 1	English, 1	English, 1	English, 1.
9:40-10:30	3	Physical Geography, 2	Physical Geography, 2	Physical Geography, 2	Physical Geography, 2	Mathematics, 3.
9:40-10:30	3	Writing, 3	Writing, 3	Writing, 3	Writing, 4	Phys. Geog. Practice, 4.
10:30-11:20	4	Writing, 1		Writing, 1	Writing, 1	Phys. Geog. Practice, 4.
10:30-11:20	4	English, 3	English, 3	English, 3	English, 3	English, 3.
10:30-11:20	4	Physical Geography, 4	Physical Geography, 4	Physical Geography, 4	Physical Geography, 4	Writing, 2.
11:20-12:10	5	English, 4	English, 4	English, 4	English, 4	English, 4.
11:20-12:10	5	Mathematics, 3	Mathematics, 3	Mathematics, 3	Mathematics, 3	Mathematics, 3.
12:10- 1:00	6		Physical Geography, 1	Physical Geography, 1	Physical Geography, 1	Physical Geography, 1.
12:10- 1:00	6	Writing, 2			Writing, 2	
12:10- 1:00	6	English, 3	English, 3	English 3	English, 3	English, 3.
2:00- 2:50	7	English, 4	English, 4	English 4	English, 4	English, 4.
2:00- 2:50	7	Mathematics, 1		Mathematics, 1		Mathematics, 2.
2:50- 3:40	7	Mathematics, 4	Mathematics, 4	Mathematics, 4	Mathematics, 4	Mathe'tcs, 4 & English, 2.
2:00- 4:00				M. E. Praclice, 2		M. E. Practice, 3.
2:00- 4:00		Phys. Geog. Practice, 2		Phys. Geog. Practice, 3		
5:00- 6:00		Drill		Drill		Drill.

GRADUATE COURSES.

Graduate studies in the Agricultural or Horticultural Courses lead to the Degree of Master of Science (M. S.) ; in the Mechanical and Civil Engineering Courses to the Degrees of Mechanical Engineer (M. E.) and Civil Engineer (C. E.) respectively.

It is required for admission to study for one of these degrees that the candidate be a graduate of this College, or of some other institution approved by the Faculty. He must select a major subject in the department in which his first degree was taken, and two minor subjects from allied departments, and one foreign language. The course of study will occupy two years, at least one of which must be spent in residence at the College. The student must pass satisfactory examinations upon the subjects of the course, and must submit an approved thesis.

Graduate students are under the general regulations of the College, but are not subject to military discipline; they may, however, be required to assist in preserving order in the barracks; and must give continued satisfaction in their studies.

The course of study must be selected from the following prescribed subjects. The selection must be submitted to and approved by the Faculty, and no change may be made without their permission.

AGRICULTURE.

Scientific and experimental work is offered graduate students in stock raising, feeding, culture of feed crops, of dairying for the purpose of extending their information and rendering them better capable of superintending these lines of work. The studies embraced are drainage and irrigation, studies in selection and cross-breeding to improve farm crops and forage plants, scientific investigations of milk, and the conduct of feeding and field experiments.

CHEMISTRY.

Quantitative analysis, physiological and industrial chemistry; theoretical and organic chemistry; agricultural chemistry; standard reference books; current chemical literature. Final thesis on original work.

Residences of Professors.

CIVIL ENGINEERING AND PHYSICS.

A. *Civil Engineering.*

Advanced work is offered in the following subjects: Hydrographic surveying; hydraulic and water supply engineering; masonry construction; stereotomy; geodesy; least squares; strains in drawbridges and other continuous structures; theory of the strength of materials; experimental work with testing machines; designing; detail and shop drawing; thesis.

B. *Physics.*

Analytical mechanics and hydro-mechanics; advanced work in sound, heat, light, and electricity; work in the laboratory.

DRAWING.

Descriptive Geometry, *Watson.*
Shades and Shadows, *Lawrence.*
Such advanced work in drawing as may be needed by the student for his special course.

ENGLISH AND HISTORY.

A. *English.*

Anglo-Saxon and Norman-French origins of the language. Advanced studies in the literature.

B. *History.*

The beginnings of civilization and the principles of ethnology.
Original investigation in some special line.

HORTICULTURE AND BOTANY.

A. *Horticulture.*

Propagation and improvement of cultivated plants; fertilization and cross-fertilization forestry; pomology; management of glass houses; entomology continued, including anatomy of types; laboratory work on classification; special study on insecticides and management of an apiary;

experimental work throughout the two years in hybrididizing, nursery work and management, and commercial gardening; assisting in other experimental work.

B. Botany.

Grasses continued, reading, laboratory work, and field experiments; mycology, thesis on special work, and original research with the microscope; microscopic work in plant history, including micro-chemistry and mounting; development of mosses and ferns; drawings and readings; collections of one hundred plant specimens; animals and plants under domestication; economic botany.

LANGUAGES.

The course in this department will embrace such studies and exercises as will lead to a thorough and practical knowledge of either the German or French language and literature.

MATHEMATICS.

Advanced Analytic Geometry; Differential and Integral Calculus; Analytic Mechanics; Differential Equations; Least Squares.

MECHANICAL ENGINEERING.

Continuation of fourth year's work and Steam Engine (by Rankine) begun in first year. Experimental work in the machine shop; Steam Engine (Rankine) completed; special subjects and original designing in second year. Practice same as in fourth year.

ELECTIVE COURSES.

Elective courses, extending through two years, are offered, subject to the following conditions; the students in these courses to be known as irregular students:

1. To enter upon an elective course the student must be able to comply with the requirements for admission to the Third Class. He must elect, *in conformity to the regular schedule,* studies for which he is qualified, amounting to at least *eighteen* hours per week, and practice amounting

to at least *seven* hours per week for each term, besides drill as given to regular students; his selection to be subject to the approval of the Committee on Elective Courses. In his second year all his work must be selected from classes above the third.

2. A student in an elective course, upon the completion of the equivalent of two full years' work, as defined above, shall be entitled to a certificate signed by the President and the heads of the departments in which he studied.

3. A regular student may enter upon an elective course only with the consent of his parent or guardian and of the Faculty, and only at the beginning of a term. He shall receive no credit for work done, during the year in which he makes the change, in any department which he drops on becoming an irregular student.

4. An irregular student shall not be allowed to do more than sixty hours' voluntary work per month under the student labor system.

5. Irregular students shall be subject to military duties and to the Rules and Regulations just as are regular students.

SPECIAL COURSES.

Upon correspondence with the President, special industrial courses may be arranged with the professor or professors under whom instruction is desired; such courses, however, will not be encouraged, and a student, after having entered a regular course, will not be allowed to change it without permission of the Faculty.

SHORT COURSES IN AGRICULTURE AND HORTICULTURE.

Two short special courses for the study of Live Stock, and Fruit and Vegetable Culture are offered for the benefit of mature men who are practically interested in those pursuits and are unable to enter upon one of the regular courses. These short courses will begin January 8th, 1900, and will continue eight weeks. Those desiring further information in the matter are invited to communicate with the President of the College.

GRADES, REPORTS, EXAMINATIONS AND ADVANCEMENT.

Records of the standing of each student are kept by the professors of the several departments. This standing is indicated by a system of marks based upon 100 as a maximum, with decimal gradations.

A monthly report is mailed to the parent or guardian of each student, showing his class standing, conduct and health.

Examinations are held from time to time during the session, as special subjects of study may be completed.

A student's final grade in any subject is determined by averaging his term grade, if any, with his examination grade, if any. Then, provided the examination grade be not below 55, he will be passed on a final grade of 66 in the Third and Fourth Classes, of 70 in the First and Second.

In subjects where no examination is given, the student, in order to pass, must have a term grade at least as high as the passing grade of his class, and must complete a certain amount of practice or work prescribed by the professor in charge.

A student who has been found deficient on any subject will be given a second examination; but he must make the passing grade of his class thereon, without taking into account his term grade. This second examination will not affect his class standing.

No student will be given more than two examinations on one subject; except as follows:

(1) A student who has failed on a second examination may be examined again at the opening of the next session.

(2) A member of the First Class who has failed on a second examination upon one subject only, but has complied with all the other requirements for graduation, may, by the consent of the Faculty, be given a third examination upon that subject during the week before Commencement.

Advancement from one class to the next higher (except to the First) is governed by the following provisions:

(1) A student who has attained a passing grade upon all his studies will be reported as "passed," and may enter the next higher class unconditionally.

(2) A student who has been found deficient in not more than two subjects will be reported as "passed conditionally," and may enter the next higher class, but must remove his "conditions" by making the required

passing grade at some time during the next session, or within a shorter time if prescribed by the Faculty.

(3) A student who has been found deficient in more than two subjects shall not be allowed to enter the next higher class except by making the required passing grade, at the opening of the next session, upon all but one of the subjects in which he was deficient.

No student will be admitted to the first class with any conditions still unremoved.

CERTIFICATES.

Every student who completes satisfactorily a special course, or a two years' elective course, or one of the optional studies, will be granted a certificate.

GRADUATION.

A diploma of the College, with the degree corresponding to the course of study pursued, will be granted students who complete one of the prescribed courses and pass satisfactory examinations on all the branches embraced therein. Each candidate for graduation is required to prepare a thesis upon a subject bearing upon his work in some scientific or practical department. The subject must be submitted to the Faculty for approval by March 20.

The thesis must be satisfactory to the head of the department in which it was writtten.

The diploma fee is five dollars.

HONORS.

The three students of the graduating class who have the best records for scholarship and deportment are known as honor men; but this rule may be modified if the number of students in any class or their scholarship shall not warrant such distinction.

In each of the lower classes the three students having the highest general average in all their studies, and also in each department the three students of the several classes whose final grades are highest, are announced at commencement as "distinguished."

DEPARTMENTS OF INSTRUCTION.

DEPARTMENT OF AGRICULTURE.

PROFESSOR CONNELL,
ASSISTANT PROFESSOR SOULE.

This department instructs the students of the Fourth Class of all courses, and other classes taking the Agricultural Course. The studies are systematically arranged for the purpose of applying many of the scientific principles of chemistry, botany, physiology, and physics (which are taught by the other departments of this course) to the practical subjects of "Field Crops" and "Live Stock Husbandry." A knowledge of these sciences forms the basis of the instruction given in the class room by the Agricultural Department. The study of physics gives accurate information and offers useful explanations of those primary laws of nature that control light, heat, sound, water, the atmosphere, clouds, electricity, etc. A knowledge of these subjects is necessary to a clear understanding of changes in atmospheric temperature, rainfall, frost, evaporation, and other physical phenomena of importance to the farmer. The study of botany informs the student of scientific names and classification of plants into natural groups, their habit of growth, and treats of the laws that govern the essential conditions of plant growth. The study of zoology, including the subdivisions, animal anatomy and physiology, proper hygienic conditions, the diagnosis of disease, and a study of the necessary medical or surgical treatment of animals, forms an important division of the students' technical education. The study of chemistry serves to give the student an intimate knowledge of the composition of plants (and plant food), and of animal bodies (and stock food), and of the laws governing the composition of plant and animal nutrients.

Physical geography is the first study taught by the Agricultural Department. The distribution of industries and their relationship are considered. This study familiarizes the student with agricultural and other industrial conditions in all parts of the world. The principles of "Stock Breeding" are next considered. This is followed by a study of the recognized "Breeds of Live Stock" which have been formed by the application of the scientific principles of heredity, variation, etc. This subject is amply illustrated in the pure bred stock owned by the College. From

LECTURES—GRASSES AND CROPS.

PRACTICE—HABITS OF FARM CROPS.

Lectures—Live Stock and Dairying.

Practice—Testing Milk for Fat.

breeds and breeding attention is turned to the subject of supplying animals with necessary "Grasses and Forage Plants." "Dairying" is next taught, and the student is made familiar with the various methods of handling milk in the production of butter and cheese. In the fourth, or graduating year, all of the various styles of farming and stock raising are discussed and studied separately. Instruction is also given in the scientific principles of stock feeding and in irrigation and drainage.

Third Class.—Having begun the study of botany, this class undertakes the subject of "Grasses and Forage Plants" in the Agricultural Department. Each of these is considered with reference to habit of growth, methods and cost of seeding, its effects upon the soil, its adaptability to various portions of the State, feeding value, etc. All Texas feed crops, except fibre plants, are included in the study of this subject. It is taught in the spring term in thirty-six lectures, by reference books, and by practice with forage crops.

The various breeds of horses, cattle, swine and sheep are carefully studied as to origin, history, development, and leading characteristics of the various classes of domestic animals. Students are trained by practice in judging stock of the different breeds, good specimens of which are found in the large herds owned by the College.

Second Class.—The principles of "Stock Breeding" are taught in this class, basing the instruction upon the students' knowledge of animal physiology, with which it is nearly related. Heredity, atavism, variation, selection and in-breeding, and their practical application to domestic animals, are noted. The students are also practiced in scoring and judging farm animals, and drilled in their selection, purchase, care and management by practice in measuring and scoring the live stock. This subject is taught during the fall term.

Dairying is given considerable prominence. The second class receives thirty-two lectures upon this subject. The properties and composition of milk, the variations due to breed, feed and fermentation of milk; the creaming, churning, cheese-making, testing for fat, and for adulterations; and the subject of bacteriology, are all discussed in order. The creamery building is thoroughly fitted with the latest improved machinery, and apparatus. Students of the second class use this equipment freely in performing the practical work and in the dairy practice required. The proper care of fresh milk, the operation of hand and power separators and churn, the care of creamers, and testing for acidity and for butter fat in milk and cream, can be most thoroughly learned by combining this work with the theory taught in the class room. All of the labor of a large machine dairy is performed by students. The aim is to thoroughly fit our students for taking charge of and operating creameries and dairy farms successfully in any portion of the State.

"Irrigation and Drainage" is studied by lectures given in the class-room during the spring term. The advantages of the several methods of irrigation in use are considered, the amount of water necessary for the various crops, the available water supply of all parts of the State are studied, and further time is given to the construction and location of reservoirs, laying out head ditches, construction of flumes, and the cost of raising and applying water under conditions existing in this State. Methods of securing perfect drainage are discussed, and the methods of protecting lands from washing rains, terracing farm lands, the construction of open and tile ditches are considered. A reservoir watering fifteen acres of land is in use on the College grounds, affording opportunity for the demonstration of many principles relating to irrigation. Some four miles of tile drain have been laid on the farm.

FIRST CLASS.—Having studied animal anatomy and physiology and the subjects of chemistry, the students of the first class are prepared to understand the study of scientific or rational feeding of farm animals—the study of which is begun in the fall term and pursued for two terms in the first class. The laws of animal nutrition and the composition of animal bodies are briefly considered. The individual food stuffs are then closely studied as to composition, digestibility, market value, etc. The student is then advanced to the proper feeding rations for the support of milk cattle, beeves, horses, and hogs. In this manner the economic value of all food stuffs is clearly shown in theory. During the afternoon the practical feeding of farm animals by students serves to more fully acquaint them with this subject. The best results in feeding stock by the various experiment stations of the United States, form a most valuable feature of studies devoted to this subject. Students who complete the study are well qualified to care for and manage stock farms and various feeding enterprises.

The study of "Farm Management" and the various systems of organization of farm work practiced in this State completes the study of the Agricultural Department in the fourth year, or graduating class. Comparisons are made of the different branches of agriculture, rotative and successive cropping, management and economy of farm labor, selection and care of machinery, and live stock for certain purposes, and general suggestions as to profit and loss in farming.

Practice and Work.—Work is required of each student taking the course in Agriculture. This brings him in close contact with the crops of cotton, corn, grasses, grains, the live stock, creamery, and keeps him in sympathy with all industrial enterprises and the studies pursued in the class-room. The feeding of animals for experiment in the production of milk, pork, and beef, is often done by students under the close supervision of a College officer. For voluntary work faithfully performed, students

Students' Laboratory.

are paid at a maximum rate of twelve cents per hour. Careless effort is not paid for. The twenty-four hundred acres in the farm, with one hundred and twenty milk cows, (consisting of typical Jerseys and Holsteins and grades), the hogs, the live stock, the improved tools and machinery for all farm work, the mammoth silos for preserving green stock food, offer illustrations of great practical value to the student.

Agricultural Experiment Station.—The permanent location by the General Government of the Agricultural Experiment Station for Texas at this College, under the supervision of a Director (who is also the Professor of Agriculture) makes it possible to give students the benefit of experiments conducted at the College, and permits a careful study of results of valuable tests conducted elsewhere, by frequent reference to bulletins from other Stations, files of which are kept in the Director's office. A valuable collection of scientific works bearing on all phases of agriculture constitutes the Station library, and is accessible at all times to students of the College.

DEPARTMENT OF CHEMISTRY AND MINERALOGY.

Professor Harrington,
Associate Professor Tilson.

CHEMISTRY.

The subject of chemistry is introduced by the study of inorganic chemistry, passing into a brief course of organic chemistry. The attention of the students is directed to the historical development of the science, and to the phases of chemical theory as at present understood by chemists.

After the general principles of chemistry are understood, the study will be supplemented by practical work in the laboratory. This work begins with the use of the blow-pipe, simple glass working, and fitting up of apparatus, continuing into quantitative analysis, both gravimetric and volumetric, with exercises in manufacturing chemistry also.

MINERALOGY AND METALLURGY.

The course in Mineralogy will be made as thorough as time will allow. Work in this department begins in the second class, during which time much attention is given to the systematic examination of minerals. The study is continued in connection with geology and metallurgy, special attention being given to the economic aspect of geology and to the metallurgy of iron and copper. Assaying, as practiced in connection with mines and metallurgy, is taught to students of the Mechanical Engineering course.

It is the object of the Department of Chemistry and Mineralogy to make the course of study thorough and practical, and as far as possible to equip students with information that will be at once available on leaving College.

The laboratory is well supplied with chemicals, minerals, glass, porcelain and platinum ware, gas holders and generators, filter pumps, with assay furnaces, muffles, crucibles, etc.; combustion furnaces, arrangement for Kjeldahl's nitrogen determinations; Hempel's and Elliott's gas apparatus, a Soliel-Laurent and Schmidt and Hench saccharimeters, colorimeter, reflecting goniometer, Crouche's best binocular microscope, with fittings, etc. In short, the laboratory is well supplied with the latest improved apparatus needed in well established methods of analytical work and original investigation. Our balance room contains analytical balances of the finest quality.

The department is supplied with books and current chemical literature, to which the students have free access.

DEPARTMENT OF CIVIL ENGINEERING AND PHYSICS.

PROFESSOR NAGLE.
ASSISTANT PROFESSOR SPENCE.

A. CIVIL ENGINEERING.

As shown in the course of study, the Mechanical and Civil Engineering courses are identical up to the beginning of the second term of the third class (second year). The student electing Civil Engineering now takes up studies bearing more directly upon his future work.

THIRD CLASS.—The subject of road making and maintenance extends through the spring term for two hours per week.

SECOND CLASS.—In the fall term the Civil Engineering students study the construction of sewers and drains. In the winter term they begin plane surveying, continuing it in the spring term. Railroad engineering is also taken up in this term. Field practice is given for five hours per week during the spring term.

Students in all other courses take plane surveying for three hours per week, and in addition to the class-room instruction five hours per week of field practice in the use of the compass, transit, and wye level is given.

Practice in Civil Engineering.

Each student is required to submit a plat and profile compiled from surveys made by himself. This subject extends through one term.

First Class.—Railroad engineering is continued, and the study of the projection, location, and setting of slope stakes on a line is undertaken in the field, and the quantities afterwards computed.

The mechanics of the materials of engineering and the computation of the stresses in roofs and bridges are next taken up and many numerical problems assigned. These subjects extend through two terms.

The study of hydraulics is begun in the fall term, and extends through the winter term. Many numerical problems, involving the flow through orifices, weirs, pipes and open channels, etc., must be worked out by the student.

In the spring term a course in bridge and structural designing is given, in which the design of some simple roof truss or non-continuous bridge truss is undertaken, each member of the class being assigned a special truss, upon which he is required to spend about five hours per week in the drawing room, making detail and shop drawings, showing the dimensions of main members and connections, together with a stress sheet for the structure.

Text Books: Roads, Streets and Pavements, *Gillmore;* Surveying, *Davies, Raymond;* Field-Manual for Railroad Engineers, *Nagle;* Sewers and Drains, *Adams;* Sewage Utilization, *Baker;* Hydraulics, *Merriman;* Mechanics of Materials, *Merriman;* Roofs and Bridges, Parts I and II, *Merriman and Jacoby.*

Graduate Work.—Young men desiring to become successful professional engineers will find it advisable to continue their studies after receiving their first degree. Under the head of "Graduate Courses" are outlined some of the branches in which advanced work will be given—the work assigned being adapted, in so far as is practicable, to the needs of each student. Designing, preparation of shop drawings for the design, the study of projects and review of existing structures will make a feature of the course. A large part of the time will be devoted to original design and investigation.

B. PHYSICS.

Third Class.—The entire third class study the general properties of matter, mechanics, pneumatics, hydrostatics, acoustics, heat and optics. Agricultural students take a short course in electricity and magnetism, while the Mechanical and Civil Engineering students take a more extended course in the same subject. The work of the former covers two terms, while that of the latter extends through the entire session.

Text Books: Elementary Physics, *Carhart and Chute;* Electricity and Magnetism, *Thompson.*

EQUIPMENT.

The department is supplied with an excellent assortment of engineering instruments, including the following: One transit with Gurley's solar attachment; one railroad transit; one surveyor's transit; four engineer's Y levels; one drainage level; one terracing level; one Locke's hand level; one solar compass; four other compasses; one plane table; one planimeter; one odometer; one surveyor's cross; one reflecting prism for setting off right angles; one Thatcher calculating instrument; one Colby topographical protractor; one Colby slide rule for stadia reductions; and an abundant supply of tapes, chains, pins, flag poles, leveling rods, stadia rods, etc. The department owns two fine Riehle Bros. testing machines—one of one thousand pounds capacity for cement and mortars, and the other of twenty thousand pounds capacity, arranged for tension, compression and cross-breaking; also, several large-sized models of various types of trusses, blue prints of detail and shop drawings, photographs of existing structures, etc.

The supply of physical instruments is sufficient for illustrating and verifying the laws enunciated in the text-books studied. A fine high-frequency coil, arranged for producing the Roentgen ray phenomena, has recently been added.

The department is supplied with a well assorted library of standard works on engineering and physics, to which the students have access.

DEPARTMENT OF DRAWING.

PROFESSOR GIESECKE.
ASSOCIATE PROFESSOR SPENCE.

DRAWING.

All students in the fourth class begin the study of drawing in the winter term with Thompson's Free Hand Drawing Book No. 5, which is completed in the spring term.

All students in the third class continue free hand drawing, completing Thompson's Model and Object Books No. 1 and 2.

The Agricultural and Horticultural students also make a number of drawings of leaves, flowers, plants and other natural objects; and receive enough instruction in mechanical drawing to enable them to draw the plats necessary in their study of surveying.

The Engineering students begin mechanical drawing in the third class. During the first term they draw nine plates of simple exercises, geometri-

INTERIOR OF DRAWING ROOM,

cal problems, alphabets and lettering; during the second and third terms they draw fourteen plates of exercises in projection drawing, and make three paper models. Anthony's Mechanical Drawing is used by this class.

During the first term of the second class, descriptive geometry is taught by daily recitations and the students are required to draw twenty plates of problems, or applications thereof. Faunce's Descriptive Geomerty is used. During the next two terms the students are required to draw sixteen plates of working drawings of parts of machinery, bridges or buildings; three of the above plates are isometric views, and one has to be traced and blue-printed; the students prepare the paper for this purpose; the students in Mechanical Engineering also receive a short course in kinematic drawing.

During the first term of the first class, tinting and linear perspective are taught; each student makes one finished plate in colors and one perspective drawing; during the remainder of the session each student makes drawings of subjects in mechanical engineering, civil engineering, or architecture, the purpose being to give him more practice in drawing and to acquaint him with the details of construction.

MATERIALS OF CONSTRUCTION.

In the last two terms of the first class the students in the Mechanical Engineering course study Mather's Strength of Materials, and test the strength of different materials of construction on a Riehle testing machine.

WRITING AND BOOKKEEPING.

All students in the fourth class take the introductory course of the Ellis System of Practical Bookkeeping and Business Practice, devoting from two to three hours each week to the same. During the fall term they are instructed in vertical writing.

DEPARTMENT OF ENGLISH AND HISTORY.

PROFESSOR HUTSON.
ASSOCIATE PROFESSOR PHILPOTT.
ASSISTANT PROFESSOR SOUTH.

In this department the course extends through the whole college life. Its aim is to make accurate and well informed scholars. In the lower classes the subjects are taught in parallel lines of progress, and are made to throw light on each other.

I. ENGLISH LANGUAGE AND LITERATURE.

First Year: In the class of this year there is an extended drill in the grammar, in spelling, punctuation, reading, and composition. The class reads from time to time some famous literary work of simple and vivid narration.

Text Books: *Patterson's* Advanced Grammar, *Chittenden's* Elements of English Composition, *Buehler's* Exercises in English, *Macaulay's* Lays of Ancient Rome, select poems of *Scott.*

Second Year: Rhetoric is studied during the whole of this year.

Text Books: *Genung's* Rhetoric, and Essays of *Macaulay.*

Third Year: The class of this year studies the higher and idiomatic constructions of English and the history of the language. Essays, forensic disputations, and original orations constitute part of the work of the year.

Text Books: *Meiklejohn's* English Language and Literature. Select poems and tales.

Fourth Year: This year is devoted to a course of lectures on English literature.

Text Books: Select plays from *Shakespeare.*

For reference: The Century Dictionary, *Lounsbury's* History of the English Language, *Taine's* English Literature, *Saintsbury's* Elizabethan Literature, *Morley's* English Literature, *Mrs. Oliphant's* Literature of the Georges.

II. HISTORY.

First Year: The class of this year studies the History of the United States, and the History of American Literature. Good maps furnish a valuable help in these studies.

Text Books: *Lee's* United States, *Watkins's* American Literature.

Second Year: The study of general history occupies the class of this year. Debates and compositions on historical subjects are frequently assigned as part of the work. The value of collateral reading is thus impressed upon the student.

Text Books: *Myers's* General History, with other works for collateral reading.

Third Year: This year is devoted to the History of England, especial stress being laid on the development of the English Constitution, the progress of civilization, and the close connection between the condition of the people and the state of the literature.

Text Book: *Arabella Buckley's* History of England.

Fourth Year: The study of the History of England is continued this year.

PEACH ORCHARD.

Text Book: History of England, *Buckley.*

For reference: Histories of *Green, Gibbon, Hallam, Freeman, Stubbs, Froude, Guizot, Ranke, Motley, Mommsen, Percy Greg.*

The College library is emphatically the tool house of this department. Students are urged and encouraged in every way to make large use of it.

Candidates for admission into the fourth class are examined on spelling, grammar, geography, reading, and history of Texas. Applicants for admission into the higher classes are examined on the studies already passed over by the classes below. See pages, 19, 20, 21, 22.

DEPARTMENT OF HORTICULTURE, BOTANY, AND ENTOMOLOGY.

PROFESSOR PRICE.

ASSISTANT PROFESSOR NESS.

The design of the course in Horticulture is to combine with the technical work of the department such instruction in related sciences and general education as will best prepare the student to meet the greatest demands of the horticultural industry. Throughout the course, instruction is given in subjects of general importance not enumerated below.

The existence of the vegetable kingdom being necessary to the maintenance and support of the animal kingdom, it is a special object all through the teaching in this department to make the student familiar with the laws which govern plant growth and propagation.

Special stress is laid upon the principles underlying the successful growth and management of the horticultural crops best adapted to the soil and climatic conditions of Texas.

For the first two years the courses in horticulture and agriculture are the same.

HORTICULTURE.

FRUIT CULTURE.—*Second Year, Fall Term*: Study of growth, culture, and propagation of the apple, pear, peach, plum, apricot, cherry, etc. Planting and managing orchards.

Text Books: *Thomas's* American Fruit Culturist.

Reference Books: *Barry's* Fruit Garden; *Downing's* Fruit and Fruit Trees of America.

OLERICULTURE.—*Second Year, Spring Term*: Growth, culture, preservation and marketing of vegetables. Practice in the gardens and experimental plats.

Text Books: Truck Farming for the South, *Oemler;* Sweet Potato Culture for Profit, *Price.*

Reference Books: The Vegetable Garden, *Vilmorin-Andriaux;* The Forcing Book, *Bailey.*

SMALL FRUIT CULTURE:—*Third Year, Spring Term*: Special lectures upon the culture and marketing of strawberries, raspberries, blackberries, dewberries, etc.

Reference Books: Small Fruit Culture, *Fuller.*

VITICULTURE.—*Fourth Year, Fall Term*: Culture, growth, and propagation of the grape and the management of vineyards.

Text Book: American Grape Growing and Wine Making, *Hussman.*

Reference Book: The Grape Culturist, *Fuller.*

FORESTRY.—*Fourth Year, Winter Term:* The management and planting of woodlands. Consideration of the rôle they play in the economy of nature.

Text-Book: Elements of Forestry, *Hough.*

Reference Book: North American Sylva, *Michaux.*

LANDSCAPE GARDENING.—*Fourth Year, Winter Term:* Designing, planning, and management of lawns. The art of beautifying American homes.

Text-Book: Ornamental Gardening, *Long.*

PLANT BREEDING.—*Fourth Year, Spring Term:* How to cross fertilize plants and originate new varieties. How to improve old varieties. Darwinism and its relation to horticulture.

Text-Book: Plant Breeding, *Bailey.*

Reference Books: Origin of Species, *Darwin;* Survival of the Unlike, *Bailey.*

SPRAYING.—*Fourth Year, Spring Term:* How to prepare fungicides and apply them to plants to prevent injury by fungi. Spraying machinery.

Text-Book: The Spraying of Plants, *Lodeman.*

NUT CULTURE.—*Fourth Year, Fall Term:* Planting and managing pecan orchards, etc.

Text-Book: The Nut Culturist, *Fuller.*

BOTANY.

ORGANOGRAPHY.—*Second Year, Fall Term:* Gross Anatomy, the study of the organs with which plants do their work; as roots, stems, leaves, and flowers. Their various forms and modifications.

SYSTEMATIC.—*Second Year, Spring Term:* Nomenclature, classification, description of flowering plants, and the art of collecting, naming, mounting and preserving them. An herbarium may be required.

Vineyard.

HISTOLOGICAL.—*Third Year, Fall Term:* Advanced work in structural botany; examining the minute structure of the root, stem, leaf, flowers, and fruit, with compound microscope.

PHYSIOLOGICAL.—*Third Year, Fall Term:* Physiology of plants in connection with microscopic work. The student prepares his own slides; making notes, drawings, and employing reagents. In the latter part of the term the student begins the study of cryptogams.

Text-Books: *Bastin's* College Botany; Histology of Plants, *Vines; Wood's* New Class Book of Botany.

Reference Books: *Chapman's* Southern Flora; Text-Book of Botany, *Bessy; Sach's* Botany; Physiology of Plants, *Vines; Gray's* New Class of Botany; Flora of Western Texas, *Coulter; Gray's* Field and Forest Botany.

GRASSES AND FORAGE PLANTS.—*Fourth Year, Spring Term:* Analysis of important grasses and forage plants. Their uses, habits, and cultivation.

Reference Books: Grasses of North America, *Beal;* Farmer's Book of Grasses and Forage Plants, *Phares; Vasey's* Bulletins on Grasses; *Gray's* New Class of Botany.

MYCOLOGY.—*Fourth Year, Fall and Spring Terms:* Systematic study of economic fungi in the Fall Term, and in the Spring Term the student makes culture on media, infects living plants, and prepares and applies fungicides. An herbarium of fungi is required. The subject is taught by lectures, together with laboratory practice.

Reference Books: Comparative Morphology and Biology of Fungi, *De Bary; Plowright's* Monograph of Uredineæ and Ustillagineæ; *Burrill's* Monograph of Uredineæ and Erysipheæ; United States Government and Experiment Station Reports; North American Pyrenomycetes, *Ellis* and *Everhart;* Diseases of Plants Induced by Cryptogamic Parasites, *Freiherr Von Tubeuf.*

ENTOMOLOGY.

STRUCTURAL.—*Third Year, Fall Term:* External anatomy and comparative morphology of the orders and more important families. Practice given in laboratory in dissecting and classifying.

ECONOMIC.—*Fourth Year, Spring Term:* Injurious insects, and the methods of preventing their depredations. Spraying machinery, insecticides, and their application.

Text-Book: Entomology for Beginners, *Packard.*

Reference Books: Insecta, *Hyatt* and *Arms; Comstock's* Manual of Entomology; Insects Injurious to Fruits, *Saunders;* Economic Entomology, *Smith.*

EQUIPMENT.

The department is fairly well equipped with compound microscopes. There are 150 volumes in the department library, which contain information bearing upon the subjects taught. The student has free access to these. The department has a complete file of all the bulletins issued by the different experiment stations of the United States on the subjects of horticulture, botany, and entomology.

The herbarium contains a fair collection of a large part of the flora of the State, together with 500 species of fungi, which serve to illustrate the work in botany.

The care of the orchards and vineyards, and the experiments with vegetables, afford ample practice in field work. Students of the third class have charge of a nursery, where various trees are propagated.

Recently, the United States Department of Agriculture has started experiments here in Forestry, which will serve somewhat to illustrate the teaching in Forestry.

DEPARTMENT OF LANGUAGES.

PROFESSOR BITTLE.
ASSISTANT PROFESSOR SOUTH.

It is the object of the department to furnish students of the Horticultural and Civil Engineering Courses, and others who may desire it, with a practical knowledge of German, Latin, French, or Spanish, such as will benefit them in the prosecution of a scientific career.

To this end, the text-books used and the method of imparting instruction are practical. Latin is taught as an essential to a thorough understanding of English; German and French, because neither the specialist nor the general student can afford to be ignorant of those literatures; Spanish, in view of the rapidly growing intercourse between us and the Latin Republics south of us; all of them, because systematology and scientific nomenclature are unintelligble without a knowledge of foreign languages.

Students coming to us, therefore, from the high schools of the State find here the opportunity to continue their linguistic studies by the side of agricultural and mechanical branches, to which those studies lend effective aid.

TEXT-BOOKS.

In Spanish, *De Tornos'* Grammar, with references to *Knapp,* and selections in reading from various sources.

In German, *Joynes-Meissner's* Grammar, with selections in reading suited to the student's advancement.

In French, *Whitney's* Grammar is used, and readings, mainly of a scientific character, are selected.

In Latin, *Chase* and *Stuart's* Grammars, with reference to more systematic courses, and readings from Cæsar, Vergil, Cicero, etc., as the exigencies of the course permit.

DEPARTMENT OF MATHEMATICS.

PROFESSOR PURYEAR.
ASSOCIATE PROFESSOR SMITH.
ASSOCIATE PROFESSOR BANKS.

Instruction in this department is given by the use of approved text-books, supplemented by oral explanations and lectures. The course is designed to be thorough rather than extensive. The student's knowledge of the subject studied is tested daily at the blackboard, and he will be required to apply the principles taught to the solutions of practical problems. Written solutions of selected problems will be required at stated intervals. For specimen entrance examinations, see pages 19, 20, 21, 22.

The subjects pursued are as follows:

First Year—Elementary Algebra.

Second Year—Algebra, Plane Geometry.

Third Year—Advanced Algebra, Solid Geometry, Trigonometry.

Fourth Year—Analytical Geometry, Mechanics, Calculus.

For instruction in geometry, the department is supplied with a set of Schroeder's models, imported for this institution.

Text-Books: Higher Algebra, *Wells;* Geometry, *Wentworth;* Trigonometry, *Wells;* Analytic Geometry, *Nichols;* Mechanics, *Wood;* Calculus, *Peck.*

DEPARTMENT OF MECHANICAL ENGINEERING.

PROFESSOR WHITLOCK.
ASSISTANT PROFESSOR BURGOON.
ASSISTANT PROFESSOR KERR.
INSTRUCTOR LEWIS.

This department is intended so to combine theory and practice that, after deriving a theoretical knowledge of the subject from the text-books of standard writers, the student may go into the shop and apply that knowledge in a thoroughly practical manner. With this theoretical preparation, the mind grasps the salient points and avoids the difficulties of the more practical part of the work. The work is carried on by aid of practice in the shops and drawing room, and by text-books and lectures.

First, the machinery of transmission is taken up and discussed, and especial attention paid to shafting belts, speed pulleys, gear wheels, and kindred subjects. These lead the way to the higher forms of mechanism, and later the steam engine in its general principles and various forms is studied and discussed.

As stated above, the work in the class room is supplemented in every possible way by showing the student the practical application of these principles in the machinery used at the College.

SHOPS, AND SHOP WORK.

The Machine Shop is a one-story brick building, 80x35 feet, and is joined at one end by the Blacksmith Shop, which is also brick, 20x35 feet. At the other end it is in connection with the Carpenter Shop, and above the latter are class rooms, and model room, fitted up for drawing and designing. This two-story building is also of brick, and was planned and built especially for this department. In beginning the practical work the student enters the Carpenter Shop, which is equipped with sixty sets of tools and benches. Here each student has his own set of tools when at work, and is held responsible for their condition. These tools are those which are in common use among carpenters, such as hammer, cross-cut and panel saws, square, mallet, chisels, gauge, planes, and dividers, and must be kept in order by the student using them. Thus, each student is taught in the beginning of his work not only the use of the tools, but also the importance of keeping them in good order, and in their proper places. The work in this department begins with the simplest exercises, which consist mainly in making those joints which are in common use. Each of these exercises depends more or less on those preceding it, and becomes more and more difficult as it nears the end, thus carrying the student from "squaring" a piece of wood to the construction of a small bridge truss. The work is carried on from drawings, similar to those found in any of our shops, and thus the student learns not only to read mechanical drawings, but to construct the article wanted with only such drawings for a guide.

Having finished the woodwork, and acquired a knowledge of edged tools, the student is transferred to the Blacksmith Shop. Here he finds the same ideas of responsibility and good order. There are thirteen forges, supplied with a blast from a power blower, which is run by an engine built and set up by the graduating class of 1888. Here, as in the Carpenter Shop, the first exercises are very simple, becoming more and more difficult as they proceed, until, at the end, the student has made welds of different kinds, a chain with a hook and swivel, and has forged out and tempered several tools, such as engine lathe tools and cold chisels. After this, a move is made into the Machine Shop, where are found sixteen wood-turning lathes. On these he receives instruction in both inside and outside turning, everything being made according to drawings furnished from the tool room. Then follows instruction in the use of iron-working machinery, for which there is the following equipment: Six engine lathes, planer, drill, shaper, and milling machine. With these machine tools are taught the principles of cutting and shaping wrought and cast iron, steel and brass. Throughout the course the student receives systematic instruction, and the work is so graded as to bring into use as far as possible those principles which have been taught him in the class room. The instruction throughout the course is made as practical as possible, and at the same time is of such a nature as to call for intelligent thought in connection with the manual labor. Special attention is called to the fact that all work is made, as far as possible, from drawings similar to those which the student will be called upon to use in any of our first-class machine shops, thus compelling him to think for himself, and avoid becoming a mere automaton. All tools are furnished by the College, with the exception of a two-foot rule.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

Professor Martin.

The instruction in this department is in conformity with the act of Congress, which, in endowing this and similar institutions, stipulates that military tactics shall be taught.

An officer of the regular army is detailed, by direction of the President of the United States, to carry out this requirement of the act in question, and the necessary arms, accoutrements, and ammunition, are furnished by the general government without cost to the College.

During the fall and spring terms, practical military instruction is given in infantry and artillery drills, rifle firing, and the duties of guards and sentinels. During the winter term, all military exercises are suspended, except the necessary guard. A course of lectures is delivered to the first class, embracing the duties of guards and sentinels, military signaling and engineering, military law, the preparation of the usual returns and reports pertaining to a company, the organization and administration of the United States Army, and the elements of the art and science of war.

During this term, the second class receives instruction in the section room in infantry tactics.

While the instruction in this department is as thorough as practicable in the limited time allowed, in liberal compliance with the requirements of the act of Congress endowing the College, it is not proposed to graduate soldiers. Practical military exercises are held at such hours as not to conflict with academic duties of students. The physical training of such exercises has the effect of straightening and strengthening the students, giving them an erect carriage and graceful bearing.

The military system is the means of enforcing discipline and securing regularity in the performance of academic duties, and tends to inculcate in the students that habit of truthfulness and manliness of character which characterizes young men as gentlemen.

DEPARTMENT OF VETERINARY SCIENCE.

Professor Francis.

The design in the course of Veterinary Science is two-fold. First, to acquaint the agricultural students with the diseases of our domestic animals; and second, to train their minds in sound and systematic methods of reasoning from cause to effect. To accomplish this, the instruction begins with the study of comparative physiology. This is presented by lectures, recitations, and demonstrations on the living subject. Comparative anatomy is treated in a similar manner. The horse is taken as the type, and dissections are made during the winter months.

This is presented in such a manner as not only to acquaint the student with the structure of the horse, but to teach him *how* to study organic bodies. Veterinary medicine and surgery are presented by systematic lectures on the diseases of animals, and their treatment.

Materia Medica and Therapeutics are given considerable attention.

Veterinary Laboratory.

These lectures are illustrated by a discussion of the drugs used by the Veterinarian, and the methods of compounding and administering the same. Laboratory work consists in studying the microscopic structure of the tissues, the methods of hardening, sectioning, staining, and mounting. Each student is provided with a first-class microscope, ranging from 50 to 400 diameters, and all necessary requisites for prosecuting the work. The department is equipped with Azoux's model of the horse, complete, and several special pieces of the same material. We have, also, the skeleton of man, horse, pig, goat, and various other animals, mounted. There are also a considerable number of skulls and other bones, both healthy and diseased. There is also quite a collection of parasites, tumors, monstrosities, dissected preparations, and surgical instruments belonging to the department. The library of the department is quite respectable, and contains all the standard works in English, and some in other languages. The total value of the equipment is about $3000.

GENERAL INFORMATION.

LOCATION.

The College is situated at College Station, in the county of Brazos, five miles south of Bryan, and ninety-five miles northwest of Houston. The Houston and Texas Central Railroad runs through the grounds, daily trains stopping at the Station, about 650 yards from the main building. Students and visitors are advised to take trains arriving here in the daytime.

POSTOFFICE.

This is College Station, not Bryan. It is important that correspondents should observe this, since letters are often delayed by going to the latter place. College Station is a money order office.

MAIN BUILDING.

The main building, erected in 1876, stands on the highest point of the grounds. It is four stories high, made of brick, with mansard roof and towers. The rooms are all of high pitch, and well ventilated. There are about forty rooms in the building. On the fourth story nearly half the space is occupied by the rooms assigned to the drawing department. The two society halls and the armory, are also on this floor. On the third floor are section rooms of the departments of English, languages and mathematics, the library and reading room. On the second floor are the President's office, the business office, the book store, the chemical laboratory and section room, the agricultural section rooms, the office of the Director of the Agricultural Experiment Station, and a janitor's room. On the first floor are private chemical laboratory, furnace room; section room and office of the department of horticulture, entomology, and botany; store room; dark room; guard room; mathematical section room; commandant's office; and section room and laboratory of the department of veterinary science. There are broad halls running through each story at right angles to each other, and two sets of stairways, one in the middle, the other at the end of the building.

SHOPS.

North of the main building are found those buildings occupied by the department of mechanical engineering, which consists practically of one building, although made in two distinct parts. First, the one containing the carpenter shop, class rooms and model room; second, that containing the machine and blacksmith shops and the boiler room. The carpenter shop is fitted up with benches and tools for the accommodation of sixty pupils, while above it, on the second floor, are two class rooms and a model and designing room. Back of this are the other shops mentioned, in a building of one story. Power for the machine shop is furnished by an eighteen horse power Straight Line Engine, and that for the blacksmith shop by a five horse power engine, which was built and set up by the graduating class of 1888. The machine shop is equipped with sixteen wood turning lathes, circular, band, and jig saws, emory wheel stand, six engine lathes, planer, shaper, drill, and milling machine. The blacksmith shop has thirteen forges, with necessary tools, power blast, and exhaust fan.

GATHRIGHT HALL.

This building was erected in 1876. One wing contains dormitories, accommodating thirty-six students, and the section rooms and instrument rooms of the department of civil engineering and physics. The other wing is at present used for residences. It is named in honor of Thomas L. Gathright, the first President of the College.

PFEUFFER HALL.

This building, erected in 1887, is for a dormitory, and has capacity to accommodate seventy-five students. It is named in honor of Hon. George Pfeuffer, a former President of the Board of Directors.

AUSTIN HALL.

This is a dormitory, erected in 1888, and has capacity to accommodate seventy-five students. It is named in honor of Stephen F. Austin.

ROSS HALL.

This is another and more commodious dormitory, three stories high, with forty-one rooms, erected in 1892, and has accommodations for eighty-two students. It is named in honor of the late President L. S. Ross.

ASSEMBLY HALL.

This is a two-story brick building, erected in 1889, having a main floor and a gallery. In it are held the public exercises of the College, and examinations for large classes.

MESS HALL.

This building was erected in 1897. Its dining hall has capacity for over five hundred students.

INFIRMARY.

This is a two-story building, erected in 1895. It contains four large wards with toilet rooms, and four small rooms for special cases, accommodating thirty-six patients. It contains also the surgeon's offices and music rooms.

The surgeon will give his attention to all students without charge other than the regular medical fee of five dollars, paid by each student upon entrance.

NATATORIUM.

The natatorium, erected in 1894, comprises a system of bath rooms and a swimming pool twenty-five by fifty feet and of varying depth, supplied by deep well with pure white sulphur water. In winter, the water for the bath rooms is heated to any desired degree by appliances for the purpose in the building.

CREAMERY.

The creamery has been in successful operation since 1888. It is in a substantial building, supplied with a complete outfit of the latest improved apparatus for making butter. The machinery is driven by a six-horse power steam engine, and by a four-horse power gasoline engine. Practice in both butter and cheese making forms part of the agricultural course.

FARM BUILDINGS.

These are situated several hundred yards in the rear of the main building. They consist of two large barns, a milking shed, and a piggery.

There are connected with one of the barns four large silos owned by the Agricultural Experiment Station, and students will have the advantage of practical instruction in the construction of silos and the best methods of preparing ensilage.

Infirmary.

OTHER IMPROVEMENTS.

Other improvements comprise a laundry, with full capacity to meet the demands of the College; an ice plant with a daily capacity of three tons; a complete system of water works, which furnishes ample water for irrigation and fire protection; an electric light plant, of full capacity for lighting grounds and buildings, a fire-proof artillery shed, for protection of two three-inch breech-loading rifled cannon, manufactured by the United States government for the College.

LANDS.

The county of Brazos donated to the College two thousand four hundred and sixteen acres of land lying on each side of the Houston and Texas Central Railroad, five miles from Bryan and ninety-five from Houston.

GROUNDS, FARM AND GARDEN.

The garden, orchard, barn yards, and campus are included in the enclosure to the east of the Station. The campus, which consists of some twenty-five acres of lawn, shrubbery, and flowers, surrounds the College buildings. Roses bloom in great profusion and variety on the campus nearly every month in the year.

The orchard, vineyard, nursery, and garden are located north and east of main College building. About fifty acres are devoted to this work. The object of this work is two-fold: First, to test the numerous varieties and methods as adapted to this soil and climate; second, to give object lessons to students, and thus serve to illustrate the lecture room work in teaching. The peach orchard of 187 varieties is now in full bearing. The new vineyard of 205 varieties and the blackberry and dewberry garden of 25 varieties are bearing. In the nursery the students are taught various methods of propagating different fruits. Peach and pear trees, which the students propagate by budding and grafting, are being set each year in permanent orchards, northwest of main building.

The farm comprises about 250 acres, not including pasture lands owned by the College. This is kept in a high state of cultivation by use of the most improved machinery, crop rotation, and irrigation. On the west side of the railroad two pastures of 800 acres each are under fence. The College owns herds of registered cattle, consisting of Holsteins, Galloways, and Jerseys, besides a number of high grade cows, which supply the College with milk and butter.

LIBRARY AND READING ROOM.

A valuable library and reading room have been provided for the use of the students. The library now comprises standard works of history, biography, agriculture, mechanics, engineering; mathematics, natural science, political economy, mental and moral philosophy, poetry, general literature, and reference.

LIST OF PERIODICALS AND PAPERS.

The following papers have been contributed to the library by the publishers, excepting those marked with an (*), which have been subscribed for:

Agriculture.

Acker's Gartenbau Zeitung, Milwaukee.
American Dairyman, New York.
*American Gardening, New York.
American Sheep Breeder, Chicago.
Bulletin Séances de la Societe de l'Agriculture, Paris.
Bulletin Ministère de l'Agriculture, Paris.
*Country Gentleman.
Farm and Fireside, Springfield, Ohio.
Farm and Home, Springfield, Mass.
Farm, Field and Fireside, Chicago, Ill.
Farming, Toronto, Canada.
Farmer's Call, Quincy, Ill.
Farm Journal, Philadelphia.
Farmer's Review, Chicago, Ill.
Farmer's Voice, Chicago, Ill.
Kansas Farmer, Topeka, Kans.
Massachusetts Plowman, Boston, Mass.
Mirror and Farmer, Manchester, N. H.
Metropolitan and Rural Home, New York.
Our Grange Homes, Boston, Mass.
*Rural New Yorker.
*Southern Cultivator, Atlanta, Ga.
Southern Planter, Richmond, Va.
Texas Farm and Ranch, Dallas, Texas.
Wisconsin Agriculturist, Racine, Wis.

Stock.

American Sheep Breeder, Chicago, Ill.
*Breeder's Gazette, Chicago, Ill.
Texas Stockman and Farmer, San Antonio, Texas.

Lumber.

Southern Industrial and Lumber Review, Austin, Texas

Dairy.

Hoard's Dairyman.
Jersey Bulletin, Indianapolis, Ind.

Mechanical.

*Architecture and Building, New York.
*American Machinist, New York.
*Dixie, Atlanta, Ga.
*Power, New York.
*Railroad Gazette, New York.

Scientific.

*Botanical Gazette, Chicago, Ill.
Drainage Journal, Indianapolis, Ind.
*Electrical World, New York.
*Engineering News, New York.
*Engineering Magazine, New York.
*Engineering and Mining Journal, New York.
*Nature, London, Eng.
*Popular Science Monthly, Boston, Mass.
*Scientific American and Supplement, New York.

Military.

*Journal of the Military Service Institute, New York.

Literary.

*Century, New York.
*Cosmopolitan, New York.
*Fortnightly Review, London.
*Forum, New York.
*Frank Leslie's Monthly.
*Germania, Boston, Mass.
*Harper's Monthly, New York.
Industrialist, Manhattan, Kans.
*Literary Digest, New York.
*Littell's Living Age, Boston, Mass.
*Nation, New York.
*North American Review, New York.
*Public Opinion.
*Review of Reviews.
*Scribner's Magazine, New York.

Religious.

Christian Observer, Louisville, Ky.
Southwestern Presbyterian, New Orleans.
Texas Baptist and Herald, Dallas, Texas.
Western Recorder, Louisville, Ky.

Juvenile.

*St. Nicholas, Boston, Mass.
*Youth's Companion, Boston, Mass.

Illustrated.

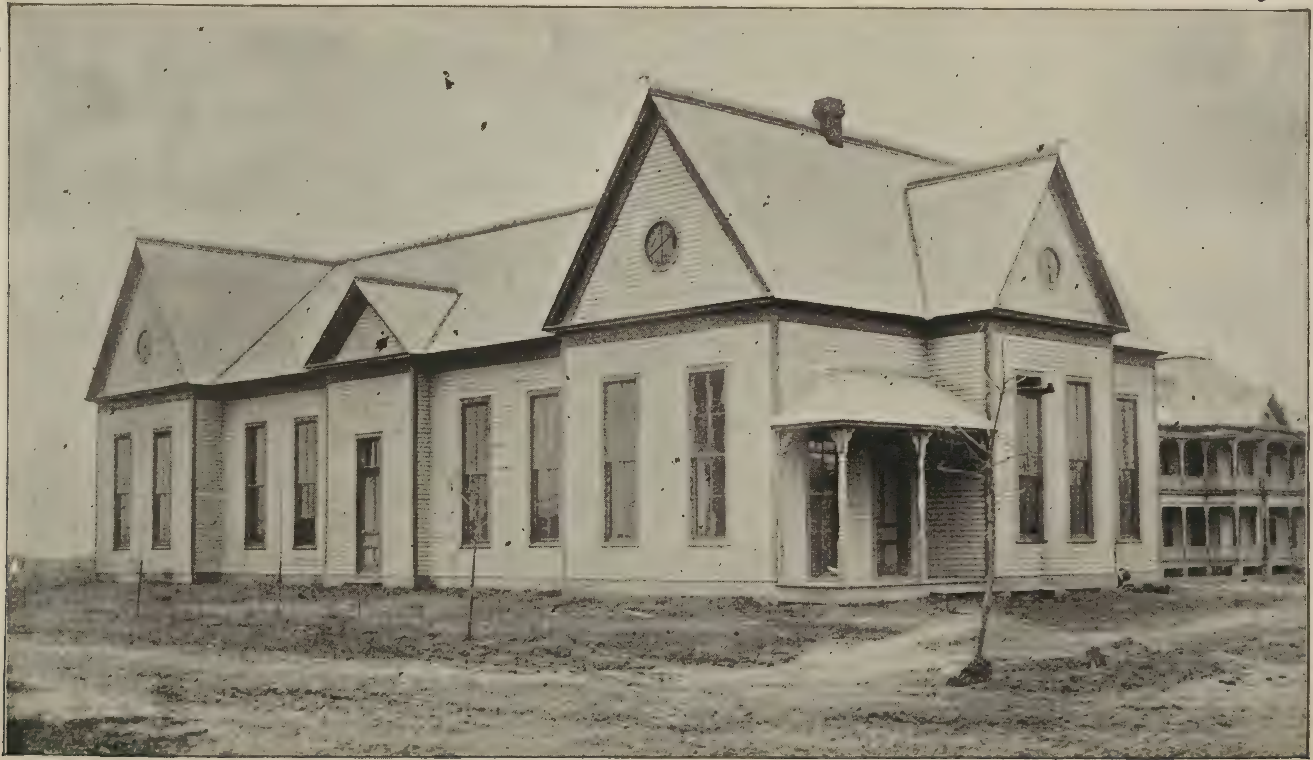
*Harper's Weekly, New York.
*Puck, New York.
*Ueber Land und Meer, Berlin, Germany.

Educational.

*Texas School Journal, Austin, Texas.

General News.

Bellville Wochenblatt, Bellville.
Brazos Pilot, Bryan.
Brazos Blade, Bryan.
Bryan Evening Pilot, Bryan.
Daily Bryan Eagle, Bryan.
Daily Examiner, Navasota, Texas.
*Dallas News, Dallas.
Denison Herald, Denison.
Eagle Pass Guide, Eagle Pass.
*El Rigidor, San Antonio, Texas.
Floresville Chronicle, Floresville.
Franklin Herald, Mount Vernon.
Freie Presse fur Texas, San Antonio.
Gainesville Signal, Gainesville, Texas.
Georgetown Signal, Georgetown.
*Houston Post, Houston.
Industrial Press, Rusk, Texas.
Jacksboro Gazette, Jacksboro.
La Grange Journal, La Grange.
*L'Abeille, New Orleans, La.
Mason County News, Mason.
Midland Gazette, Midland.
Navasota Weekly Review, Navasota.
New Boston Herald, New Boston, Texas.
*New York World (Weekly), New York City.
Nord Texas Presse, Dallas.
Palestine Semi-Weekly, Palestine.
Pearsall News, Pearsall, Texas.
*Picayune (Weekly), New Orleans.
Seguin Enterprise, Seguin.
Semi-Weekly Times, Palestine.
Standard-Herald, Rusk.
Sunday Gazette, Denison.
Svoboda, La Grange, Texas.
The Truth, Corsicana, Texas.
Traveler's Record, Hartford.
Uvalde News, Uvalde.
Van Alstyne News, Van Alstyne.
Victoria Review, Victoria.
Vorwarts, Austin.



NATATORIUM.

LITERARY SOCIETIES.

There are two literary societies at the College—the Austin and the Calliopean. They meet weekly in their respective halls for practice in debate, literary composition, and declamation. Public debates are held frequently during the session, and speakers are invited to deliver addresses.

RELIGIOUS AND MORAL CULTURE.

Every Sunday there will be service in the chapel. The faculty will try by all means within their power to protect and develop good morals in those committed to their charge.

The situation of the College is peculiarly favorable for the preservation of the morals of the students. The nearest town is distant five miles, and it is almost impossible for any student to go to Bryan, even for a short time, without his absence becoming known to the authorities. The temptations that beset young men in cities are entirely absent here.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

This organization, purely voluntary with the students, has exerted so quiet, yet steady and helpful, an influence upon the morals of the corps that it deserves notice as a recognized part of the College work. Numbering from thirty to fifty young men, it forms a nucleus around which the better elements gather, and a restraint which is felt more or less by any who are ill disposed.

HYGIENE.

The buildings of the College stand upon the crest of a "divide," from which there is sufficient slope to carry off all drainage.

The soil is sandy, and mud and water disappear within a few hours after rain. An extensive open prairie surrounds the College on all sides. There is a constant breeze—usually very strong. The water used by students is obtained from cisterns, supplied from high, clean roofs.

The rooms of the students are inspected at least twice a day, and are required to be kept neat and well ventilated.

There is in the vicinity of the College apparently nothing to produce malarial sickness, and as a matter of fact there is very little of it here. All serious sickness has been in the form of pneumonia and measles, which do not depend on local causes.

The food served in the Mess Hall is abundant, palatable, and wholesome. It is therefore very desirable that parents should refrain from sending boxes of delicacies to their sons. The practice of eating from these between meals is undoubtedly very injurious to the health of the young men, and the surgeon has traced more sickness and consequent loss of time to this one cause than to any other.

The drill, farm and shop practice, and athletic sports furnish abundant and wholesome exercise for the students.

TO PARENTS AND GUARDIANS.

The necessity for uninterrupted attention to their studies on the part of students can not be too strongly urged. It is impossible for a young man to become interested in his work here if he is permitted to leave the College whenever any special amusement is advertised in our neighboring towns and cities. It is therefore respectfully asked that those who send their sons or wards here do not, except in the most pressing emergencies, request permission for them to leave their studies.

Whenever the parant or guardian shall leave the application for special permits to the discretion of the son or ward, the College authorities will judge of the propriety of granting such permits.

MILITARY ORGANIZATION AND DISCIPLINE.

For the purpose of maintaining good order and discipline, as well as for the proper execution of the law of Congress requiring military instruction of the students, they are organized into a battalion of four companies and staff. The battalion is under the immediate command of the Commandant. The officers, commissioned and non-commissioned, are students taken for the most part from the first and second classes. They are appointed by the President of the College upon the recommendation of the Commandant, and their appointment and rank are made to depend upon the active and soldierly performance of their duties, their sense of duty and responsibility, and their general good conduct and class standing.

The President, by College regulations, is responsible for the government and management of the College, and supervises and controls all the departments, collegiate and otherwise.

The Commandant has immediate command of the corps of students, and is responsible for the military organization. All permits for privileges, all excuses and explanations for delinquencies must be submitted through him.

GENERAL REGULATIONS.

It is understood that every student upon entering the College pledges himself to an honest effort to observe the regulations and sustain the authorities in the maintenance of discipline.

The strictest attention to study, and the most exact punctuality in attendance on recitations and other duties, will be made the condition of every student's continuance at the College, and any student who without authority absents himself from recitations or any other duty, deserts his class, or refuses to attend when warned, shall be dismissed, or less severely punished, at the discretion of the Faculty.

Students are forbidden to enter into combinations under any pretext whatever. One who shall begin, excite, cause or join in any boisterous or riotous conduct, or become a party to any agreement to avoid or violate any regulation, to hold no intercourse with a comrade, or to do any act to the prejudice of good order and military discipline, shall be dismissed.

If any student shall be guilty of hazing, or of inciting others thereto, he shall be expelled, and it shall be the duty of the President to place opposite his name in the Catalogue the words, "expelled for hazing."

Students are prohibited, under the penalty of dismissal, from having in their possession ammunition, weapons, or arms not issued for the performance of military duty; nor shall these be retained loaded in quarters under any pretext.

A student who shall drink, or bring, or cause to be brought within the cadets' limits, or have in his room, or otherwise in his possession, any fermented or intoxicating liquor, or fruits or viands preserved in intoxicating liquor, shall be dismissed or otherwise punished, at the discretion of the Faculty.

No student shall have in his possession or play at cards or games of chance, engage in a raffle, or in any manner wager money or other things, on penalty of dismissal.

Permission to attend private parties or places of public amusement will not be granted during the term.

No cadet can be granted a leave of absence during a term without an urgent necessity.

No student is allowed to leave the College during the session without permission of the President of the College, on application through the Commandant.

A student who shall cut, mark, or otherwise injure or deface the buildings, furniture, or appurtenances, the trees, shrubbery, greensward, grounds, fences, stables, or outhouses, or who shall lose, injure, destroy, or improperly dispose of the arms, accoutrements, or other property of the College, shall make good all damage, and be dismissed or otherwise punished according to the nature of the offense.

When the responsibility for the destruction of State property can not be fixed upon any one, the amount of the damage will be assessed against the occupants of a room or division of the entire body of students, as the case may require.

Students receive the admonition and counsel of the President before being subjected to any penalty, except in the case of flagrant offenses.

Those who are habitually neglectful of their duties, or who do not regularly attend their classes, will be required to withdraw from the College.

To each recorded delinquency a number of from one to ten, proportional to the degree of the offense, in a moral and military view, is assigned to express demerit.

Any student receiving demerits as follows shall be declared deficient in conduct and subject to dismissal: In the first class: in the fall term 40, winter term 30, spring term 30, in the year 100; in the Second class: in the fall term 60, winter term 50, spring term 40, in the year 150; in the Third class: in the fall term 80, winter term 60, spring term 60, in the year 200; in the Fourth class: in the fall term 100, winter term 75, spring term 75, in the year 250.

AFFILIATED SCHOOLS.

The Faculty desire to bring the College into closer relations with the schools of the State, by providing that graduates of approved schools may be admitted to the College on diploma or certificate at the beginning of the session without examinations. Superintendents who desire to have their schools enrolled among such affiliated schools are invited to examine the requirements of admission to the Fourth and Third classes and the specimen examination questions on pages 23-26.

The offer of affiliation is made upon the following terms: The Superintendent of a school desiring affiliation should obtain from the President of the College a form of application to be filled out and returned. If the application should be approved by the Faculty, the Superintendent will be notified and the name of the school and those of the Superintendent and the Principal enrolled in the Catalogue. The privilege of affiliation will be withdrawn from any school whose graduates show a lack of thoroughness in their preparation for the work of the College. Affiliated schools will be divided into two groups: (A) those whose graduates are admitted to the third class; (B) those whose graduates are admitted to the fourth class.

Catalogues of the College will be sent regularly to the Principals of affiliated schools, and they in turn will be expected to send the President copies of their reports or catalogues.

LIST OF AFFILIATED SCHOOLS.

GROUP A.

Allen Academy .... Madisonville.
Principals J. H. and R. O. Allen.

Atlanta City School..Atlanta.
Supt. G. W. Florence.

Austin Academy ....Austin.
Principal J. Stanley Ford.

Beeville High School..Beeville.
Supt. T. G. Arnold.

Bellville High School..Bellville.
Supt. C. W. Feuge.

Bonham High School..Bonham.
Supt. H. G. Reed. Principal J. L. Hannold.

Bowie High School..Bowie.
Supt. Jas. T. Johnson, A. B. Principal A. E. Burnett.

Brackett High School..Brackettville.
Ex-Officio Supt. R. Stratton. Principal H. W. Goodwin.

Brenham Central School..Brenham.
Supt. E. W. Tarrant. Principal Miss Mary Rial.

Brownwood High School..Brownwood.
Supt. F. D. Shepherd. Principal W. S. Fleming.

Bruce Academy..Athens.
Supt. W. H. Bruce.

Bryan High School..Bryan.
Supt. T. S. Minter. Principal S. H. Hickman.

Cameron High School..Cameron.
Supt. A. N. W. Smith. Principal John F. O'Shea.

Clarksville High School..Clarksville.
Supt. W. C. James. Principal Miss Ella Watson.

Cleburne High School..Cleburne.
Supt. F. M. Fulton. Principal R. G. Hall.

Columbus High School..Columbus.
Principal J. E. Binkley.

Comanche High School..Comanche.
Supt. W. F. Rogers. Principal A. W. Evans.

Copperas Cove High School..Copperas Cove.
Supt. J. L. Hicks.

Corpus Christi High School..Corpus Christi.
Supt. C. W. Crossley. Principal M. Menger.

Crawford High School..Crawford.
Supt. R. C. Clark.

Cuero Public School..Cuero.
Supt. Thos. M. Colston. Principal L. G. Covey.

Dallas High School..Dallas.
Supt. J. L. Long. Principal Wm. Lipscomb.

Del Rio Incorporated School..Del Rio.
Supt. A. H. Horn.

Denison High School ....Denison.
Supt. Wm. Gay. Principal N. N. Marsh.

Dublin High School . . . . Dublin.
Supt. W. J. Clay. Principal J. C. Harper.

Elgin High School . . . . Elgin.
Supt. J. M. Hale.

Ennis High School . . . . Ennis.
Supt. H. F. Triplett. Principal S. A. Horton.

Evant High School . . . . Evant.
Supt. C. C. Hayes.

Fort Worth High School . . . . Fort Worth.
Supt. M. G. Bates.

Gainesville High School . . . . Gainesville.
Supt. E. F. Comegys. Principal J. P. Glascow.

Gatesville Public School . . . . Gatesville.
Supt. Dan E. Graves.

Glen Rose High School . . . . Glen Rose.
Principal W. S. Mayes.

Goldthwaite High School . . . . Goldthwaite.
Supt. L. F. Cowan.

Graham High School . . . . Graham.
Supt. J. N. Johnson. Principal H. Fowler.

Granger High School . . . . Granger.
Supt. M. M. Wolf. Principal J. M. Maxwell.

Greenville High School . . . . Greenville.
Supt. C. P. Hudson. Principal R. G. Horsley.

Henderson High School . . . . Henderson.
Supt. T. R. Day.

Hillsboro High School . . . . Hillsboro.
Supt. T. S. Cox. Principal Miss Addie Robert.

Honey Grove High School . . . . Honey Grove.
Supt. F. M. Bralley. Principal W. A. Stuckey.

Houston High School . . . . Houston.
Supt. W. H. Kimbrough. Principal S. D. Magers.

Karnes City High School . . . . Karnes City.
Supt. J. F. Carl.

Kaufman Public School . . . . Kaufman.
Supt. C. J. Maxwell.

Kenedy High School . . . . Kenedy.
Supt. A. N. McCollum.

Kosse High School . . . . Kosse.
Supt. S. S. Munroe. Principal W. M. Pendergraft.

Ledbetter Public School . . . . Ledbetter.
Supt. R. M. Gannon.

Lewis Academy . . . . Forney.
Supt. E. C. Lewis.

Liberty Normal and Business College . . . . Liberty.
Supt. D. L. Hamilton.

McGregor High School . . . . McGregor.
Supt. John S. Abbott. Principal R. Lee Abbott.

McKinney Public School..McKinney.
Supt. J. C. Ryan, A. M. Principal S. H. Home.

New Braunfels Academy..New Braunfels.
Principal J. G. Neuss.

Orange High School..Orange.
Supt. R. R. Sebring. Principal J. W. Mills.

Peacock's School for Boys..San Antonio.
Supt. Wesley Peacock.

Port Lavaca High School..Port Lavaca.
Supt. W. T. Smith. Principal J. W. Smith.

Rock Springs High School..Rock Springs.
Principal D. C. Braylis.

Runge High School..Runge.
Supt. F. Z. T. Jackson.

San Antonio Academy..San Antonio.
Supt. Wm. B. Sealey.

San Saba Public School..San Saba.
Supt. G. H. Hagan.

State Institution for the Blind..Austin.
Supt. E. P. Becton, M. D.

Taylor High School..Taylor.
Supt. A. E. Hill. Principal W. M. Williams.

Temple High School..Temple.
Supt. J. E. Blair. Principal J. F. Kimball.

Texarkana High School..Texarkana.
Supt. W. Owens. Principal W. S. Staley.

Tivy High School..Kerrville.
Supt. J. G. Toland. Principal A. C. Johnston.

Waco High School..Waco.
Supt. Chas. T. Alexander. Principal Jas. F. Lipscomb.

Waxahachie High School..Waxahachie.
Supt. W. S. Acker. Principal C. T. Taylor.

Weatherford High School..Weatherford.
Supt. H. J. Fry. Principal T. W. Stanley.

Wichita Falls High School..Wichita Falls.
Supt. W. F. Jordan. Principal W. J. Sowder.

Wortham High School..Wortham.
Supt. J. B. Jones.

GROUP B.

Cooley School..Houston Heights.
Principal Miss E. Jones.

Gonzales Public School..Gonzales.
Supt. T. L. Toland.

Hutto Independent School..Hutto.
Supt. Miss Dora E. Gibson.

Whitewright Public School..Whitewright.
Supt. T. E. Goff.

DEGREES AND HONORS.

Conferred at Commencement, June, 1898.

DEGREE OF M. S. (in Horticulture).

A. M. Hildebrandt.

DEGREE OF B. S. (in Agriculture).

W. T. Carter, Jr., W. F. H. Glover, J. G. Kerr, G. Newton, G. L. Sneed.

DEGREE OF B. S. (in Civil Engineering).

W. Bretschneider, F. J. Greenwood, T. D. Rountree, T. L. Smith, Jr., H. H. Tracy.

DEGREE OF B. S. (in Horticulture).

H. T. Abbott, E. Crow, Wm. Alexander Harrison, W. C. Martin, C. G. Robson, W. A. Scherer.

DEGREE OF B. S. (in Mechanical Engineering).

R. L. Barclay, R. M. Barnes, Stansel Brogdon, C. B. Donalson, Jr., G. F. Foutrel, A. C. Homann, H. E. Rawlins.

HONOR GRADUATES—SESSION 1897-98.

Newton, Martin, Kerr.

DISTINGUISHED STUDENTS BY CLASSES.

First Class—Newton, Harrison, Martin.
Second Class—Martin, Whisenant, Campbell.
Third Class—Simpson, O., Abrahams, Short.
Fourth Class—Thomas, Strain, Greeves.

DISTINGUISHED STUDENTS BY DEPARTMENTS.

FIRST CLASS.

Agriculture—Newton, Glover, Kerr.
Chemistry—Agricultural and Horticultural Courses—Crow, Newton, Robson.
Chemistry—M. E. Course—Donalson, Foutrel.
Civil Engineering and Physics—Smith, Bretschneider, Tracy.
Drawing—M. E. Course—Donalson, Foutrel.
Drawing—C. E. Course—Tracy, Smith.
English and History—Kerr, Newton, Smith.

GUARD MOUNTING.

Horticulture, Botany and Entomology—Horticultural Course—Harrison, Crow, Robson.

Horticulture, Botany and Entomology—Agricultural Course—Carter, Glover, Kerr.

Languages—French, Smith; Spanish, Foutrel.

Mathematics—Smith, Donalson, Foutrel.

Mechanical Engineering—Donalson, Foutrel, Barclay.

Veterinary Science—Martin, Newton, Harrison.

SECOND CLASS.

Agriculture—Barnes, Sloss, Bettis.

Chemistry—Agr. and Hort. Courses—Whisenant, Barnes.

Chemistry—C. E. and M. E. Courses—Martin, Kuhl.

Civil Engineering and Physics—M. E., Agr. and Hort. Courses—Campbell, Whisenant.

Civil Engineering and Physics—C. E. Course—Martin, Evans.

Drawing—Campbell, Ball, Kuhl.

English and History—Whisenant, Martin, Austin.

Horticulture, Botany and Entomology—Poulter, Kyle, Whisenant.

Languages—German, Martin, E.; French, Monroe; Spanish, Whisenant.

Mathematics—Whisenant, Campbell, Adams.

Mechanical Engineering—Campbell, Cousins, Horn.

Military Science—Love, Whisenant, Bowen, Martin.

Veterinary Science—Kyle, Whisenant, Sloss.

THIRD CLASS.

Agriculture—Winkler, Walden, Short.

Civil Engineering and Physics—C. E. Course—Simpson O.; Brewster J.

Civil Engineering and Physics—M. E. Course—Bryan, Fitzgerald.

Civil Engineering and Physics—Agr'l. and Hort. Course—Walden, Winkler.

Drawing—C. E. and M. E. Courses—Myers, Mosely.

Drawing—Agr'l. and Hort. Courses—Winkler, Walden.

Drawing—Commercial Course—Jones E.; Luhrsen.

Horticulture, Botany and Entomology—Walden, Leggett, W., Short, Winkler.

Mathematics—Simpson, O.; Kahn, Hutson.

Mathematics—Simpson, O.; Kahn, Hutson.

Veterinary Science—Baumgarten, Blackwell, Walden.

FOURTH CLASS.

Agriculture—Atlee, Strain, Cavitt.

Drawing—Garbade, Thomas, Fehrenkamp.

English and History—Oliphant, Spiller, Strain.

Mathematics—Fehrenkamp, Spiller, Jamison, B.

Mechanical Engineering—Elrod, Thomas, M.; Greeves.

BATTALION ORGANIZATION FOR 1898-1899.

H. B. Martin, B. M. E., Commandant.

Commissioned Staff
- S. E. Barnes, First Lieutenant and Adjutant.
- J. B. Sterns, First Lieutenant and Quartermaster.
- N. A. Brewer, First Lieutenant and Private Secretary.

Non-Commissioned Staff
- J. E. Abrams, Sergeant Major.
- T. D. Beall, Quartermaster Sergeant.
- J. Lewis, Sergeant and Battalion Clerk.
- C. M. Bryan, Corporal and Assistant Battalion Clerk.

	CAPTAINS.		
Co. A.	*Co. B.*	*Co. C.*	*Co. D.*
E. J. Kyle, 1.	R. J. Poulter, 3.	E. L. Martin, 4.	A. N. Sloss, 2.
	FIRST LIEUTENANTS.		
A. C. Love, 1.	W. H. Whisenant, 3.	R. W. Campbell, 4.	T. L. Horn, 2.
	SECOND LIEUTENANTS.		
M. Lewis, 1. C. T. Whittle, 6.	C. D. Evans, 2.	E. H. Astin, 4.	T. O. Bullard, 7.
	FIRST SERGEANTS.		
A. K. Short, 4.	W. J. Walden, 2.	M. Jackman, 3.	W. I. Bryan, 1.
	SERGEANTS.		
J. L. Carter, 18.	G. A. Buhler, 12.	W. A. Buhler, 13.	C. Baumgarten, 4.
S. McCormick, 10.	J. L. Davis, 11.	L. Fitzgerald, 5.	T. W. Griffiths, 8.
H. Moseley, 15.	B. G. Roeder, 7.	C. W. Luhrson, 17.	A. C. Hutson, 9.
G. R. Riley, 16.	S. H. Simpson, 2.	O. M. Simpson, 1.	O. W. Myers, 3.
			C. P. Rogers, 14.
	CORPORALS.		
O. T. Bundy, 14.	T. G. Atlee, 6.	E. C. Durham, 10.	S. J. Donaldson, 20.
J. H. Coleman, 19.	H. R. Cavitt, 13.	H. Elrod, 2.	W. W. Hyde. 18.
W. T. Garbade, 17.	F. S. Haberzettle, 24.	F. R. Holzman, 22.	E. L. Kendall, 11.
P. G. Kildow, 21.	A. S. McCain, 16.	E. D. Fewell, 12.	J. W. Kelly, 3.
C. E. Springstun, 1.	H. E. O'Rourke, 15.	T. J. Pinson, 25.	A. R. Leckie, 9.
W. M. Stafford, 8.	J. L. Spiller, 5.		
A. White, 4.			

BAND.

F. H. Miller, Director.
W. F. Dwyer, First Lieutenant.
J. S. Monroe, Second Lieutenant.
R. W. Cousins, 2d Lieut. and Drum Major
T. H. Clement, Jr., First Sergeant and Principal Musician.
T. C. Bittle, Sergeant, 6.

PRIVATES.

A. Coultas.	J. Harrison.	F. M. Krochell.	S. R. Biering.
R. Eberspacher.	H. R. Raphael.	M. S. Kahn.	H. C. Potthast.
S. F. McConnino.	J. E. Wittman.		E. E. Thomas.

COMMENCEMENT EXERCISES.

June 5, 6 and 7, 1898.

PROGRAMME.

SUNDAY, JUNE 5.

9 a. m.—Inspection of Cadet Quarters by College Officers and Visitors.

11 a. m.—Commencement Sermon, by Dr. B. H. Carroll of Waco.

8:30 p. m.—Address before the College Young Men's Christian Association, by Rev. J. Frank Smith of Dallas.

MONDAY, JUNE 6.

9 to 11 a. m.—Inspection of Departments, including Exhibition of Live Stock, Farm Machinery, Apparatus and Appliances for Instruction; Display of Products of Students' Work; Students at Work in Shops.

11:30 a. m.—Joint Celebration of Literary Societies.

2 p. m.—Executive Meeting of the Alumni Association.

4:30 p. m.—Review of the Battalion by the Governor of the State, followed by Company Competition Drill.

8:30 p. m.—Public Meeting of the Alumni Association.

TUESDAY, JUNE 7.—COMMENCEMENT DAY.

10 a. m.—Prayer.

Reading of Thesis by First Honor Graduate.

Valedictory Address—W. A. Harrison, College Station. (Elected by the First Class.)

Response to the Valedictory—E. J. Kyle, Kyle. (Elected by the Second Class.)

Delivery of Medals.

Commencement Address, by Hon. T. J. Ballinger of Galveston.

Conferring Degrees, by the President of the Board.

Announcement of those Distinguished in the Several Classes and Departments.

Benediction.

5 to 5:30 p. m.—Drill by Ross Volunteers.

5:45 p. m.—Graduation Dress Parade.

GRADUATING CLASS.

With Subjects of Their Theses.

AGRICULTURAL COURSE.

W. T. Carter, Jr., Brighton, "The Development of the Dairy Cow."

W. F. H. Glover, Yemassee, S. C., "The Economic Remodeling of a Southern Cotton Farm."

J. G. Kerr, Vineland, "The Determination of Butter-Fat by the Babcock Method."

G. Newton, Milano, "The Brachial Plexus."

G. L. Sneed, Engleman, "Feed Farming in Texas."

CIVIL ENGINEERING COURSE.

W. Bretschneider, Cats Springs, and F. J. Greenwood, Stoneham, "The Determination of the Magnetic Declination at College."

T. D. Rountree, Paris, "Sewage Purification."

T. L. Smith, Jr., Columbia, and H. H. Tracy, Dallas, "A Sewer System for College."

HORTICULTURAL COURSE.

H. T. Abbott, Hillsboro, "The Brachial Plexus."

E. Crow, Cisco, and C. G. Robson, LaGrange, "The Distillation of Coal and Treatment of Coal Tar Products."

W. A. Harrison, College Station, and W. A. Scherer, Anahuac, "Beautifying the City Park of Bryan."

W. C. Martin, Kyle, "The Beet Sugar Industry."

MECHANICAL ENGINEERING COURSE.

R. M. Barnes, Comanche, and R. L. Barclay, Temple, "The Indicator."

Stansel Brogdon, Bryan, "Cotton Gins."

C. B. Donalson, Jr., Kyle, "Development of the Locomotive."

H. E. Rawlins, Oak Cliff, "A Plan for Electric Light and Water Supply Station."

G. F. Foutrel, San Antonio, and A. Homan, Jr., New Braunfels, "Boiler Construction."

Battalion Inspection.

ALUMNI.

ALUMNI ASSOCIATION.

(Organized 1886.)

ORGANIZATION FOR 1898-99.

E. W. Hutchinson, '89, President	Houston.
F. Marion Law, '95, Vice-President	Bryan.
W. A. Trenckmann, '78, Vice-President	Bellville.
L. E. Allen, '87, Vice-President	Marlin.
W. L. Dazey, '94, Vice-President	Hillsboro.
P. S. Tilson, '88, Secretary and Treasurer	College Station.
B. C. Pittuck, '94, Member Executive Committee	College Station.
W. B. Philpott, '84, Alumni Editor Battalion	College Station.

EXECUTIVE COMMITTEE.

E. W. Hutchinson, '89.
B. C. Pittuck, '94.
P. S. Tilson, '88.

On the following pages are given the names of all graduates of the College, with the courses of study pursued and the degrees obtained; their occupations and residences are also given as far as known. The alumni are requested to aid the President in making the roll as accurate as possible.

From the opening of the College in 1876 to its reorganization in 1880, the studies were elective, and led to appropriate degrees. In 1880 two graduates received the degree of Civil Engineer (C. E.).

From 1881 to 1887, there were two prescribed courses, the Agricultural and the Mechanical, but no degrees were given.

From 1888 to 1895, there were four prescribed courses, leading to the degrees of Bachelor of Scientific Agriculture (B. S. A.); Bachelor of Civil Engineering (B. C. E.); Bachelor of Scientific Horticulture (B. S. H.); Bachelor of Mechanical Engineering (B. M. E.).

Since 1895 the four prescribed courses have remained the same, but the degree in each has been Bachelor of Science (B. S.), the particular course being specified in the diploma.

Names of deceased alumni are marked (*).

ABBREVIATIONS.

COURSES OF STUDY:—A., Agriculture; M., Mechanical; H., Horticulture; C. E., Civil Engineering.

SUBJECTS:—C., Chemistry; E., English; F., French; G., German; Gr., Greek; L., Latin; Math., Mathematics; P., Physics; Philos., Philosophy; S. Spanish.

DEGREES:—B. S. A., Bachelor of Scientific Agriculture.
B. S. H., Bachelor of Scientific Horticulture.
B. M. E., Bachelor of Mechanical Engineering.
B. C. E., Bachelor of Civil Engineering.
B. S., Bachelor of Science.
M. S., Master of Science.
M. E., Mechanical Engineer.
C. E., Civil Engineer.

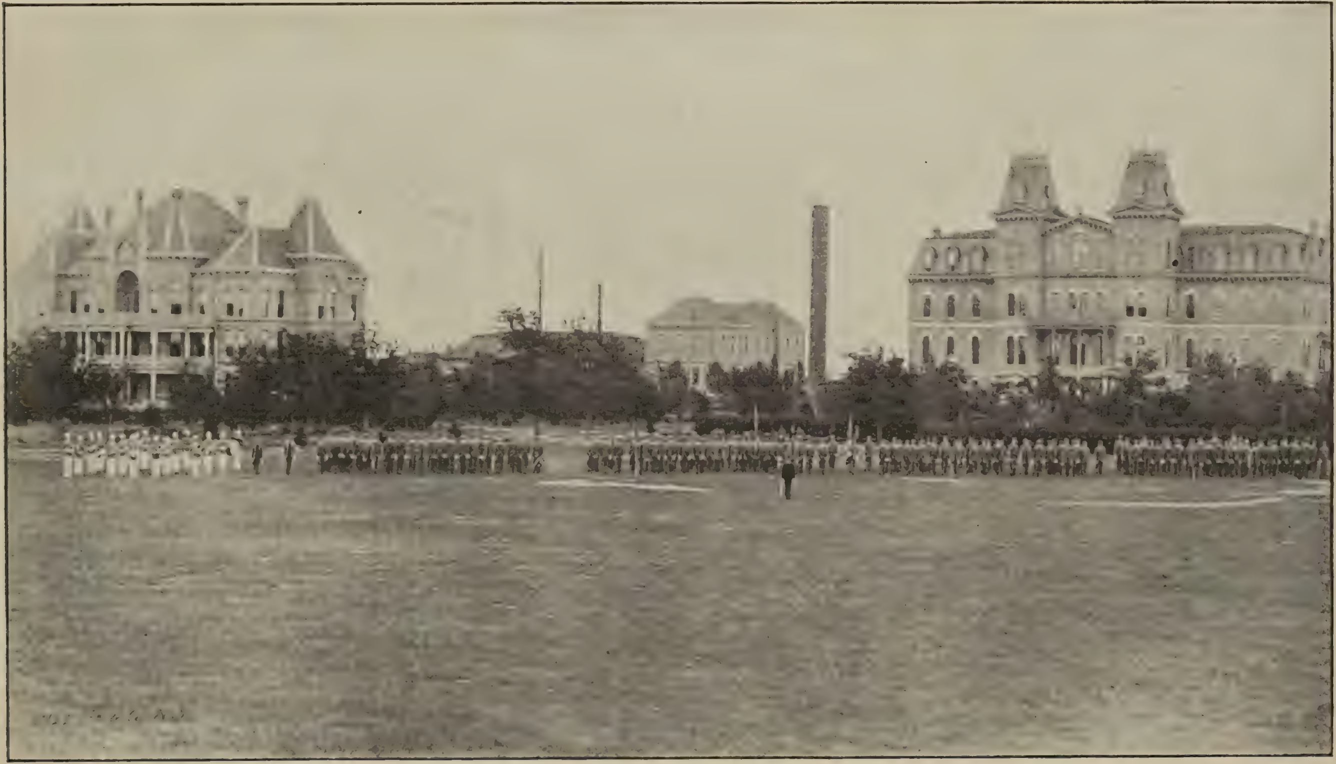
NAME.	Year	Subject or Course.	Degree.	OCCUPATION.	Residence.
Abbott, E. G	1894	C. E	B. C. E	Lawyer	Hillsboro.
Abbott, H. T	1898	H	B. S	Horticulturist	Weatherford.
Adams, A. S	1895	C. E	B. C. E	Ass't Civ. Eng. S. P.Ry	Houston.
Adams, F. L	1892	A	B. S. A	Physician	Stafford.
*Adriance, D	1886	A	M. S. '90		
Ahrenbeck, W. T	1891	M. E	B. M. E	Minister	Navasota.
Alexander, D. E	1880	E. L. Math			
Allen, L. E	1887	M		Bookkeeper	Marlin.
Allen, W. H	1888	A	B. S. A	Physician	Marlin.
Altgeld, E. J	1892	C. E	B. C. E	Bookkeeper	San Antonio.
Amsler, L. D	1889	M. E	B. M. E	Miller	Hempstead
Amthor, W	1895	C. E	B. C. E	County surveyor	Waco.
Anderson, W. D	1890	A	B. S. A	Bookkeeper	Dallas.
Andrews. V	1884	M		Physician	Valley View.
Armstrong, W. F	1882	M		Lumber Manufacturer	Chappel Hill.
Backus, U	1890	M. E	B. M. E	Fuente Coal Co	Eagle Pass.
Bailey, C. C	1892	C. E	B. C. E	Merchant	Salado.
Baker, J. J	1879	F. E Philos S.		Commercial Traveler..	Homer, La.
Baker, Searcy	1882	M		Merchant	Navasota.
Banks, A. L	1879	G	B. S. '92 M. S. '94	Assoc. Prof. Math	College Station.
Barclay, R. L	1898	M. E	B. S	Supt. stock ranch	Barclay.
Barnes, R. M	1898	M. E	B. S	Merchant	Comanche.
Beasley, W. S	1892	C. E	B. C. E	Merchant	Lancaster.
Beyer, F. C	1892	M. E	B. M. E	Ginner	Marion.
*Biberstein, F. C	1882	M			
Bittle, P. B	1896	A	B. S	Prof. Math. and Comd't T. M. I.	Llano.
Bittle, W. A	1894	A	B. S. A	Principal Pub. Schools	Washington, La.
Black, M	1879	Philos. E		Minister	Sylvania, Ark.
*Blakemore, T. E	1880	E. Math			
Bledsoe, F. F	1880	E. Gr		Teacher	
Bloor, A. W	1895	A	B. S. A		Manor.
Blount, S. L	1896	A	B. S	Veterinary Surgeon	Temple.
Bocock, J. H	1894	A	B. S. A	Stock farmer	Crystal, Va.
Boykin, R. E	1892	M	B. M. E	Teacher	Powell.
Braun, P	1888	M	B. M. E		San Antonio.
*Brittingham, W. F. Jr.	1890	C. E	B. C. E		
Bretschneider, W	1898	C. E	B. S	Civil engineer	Cat Springs.
Brogdon, S	1898	M. E	B. S	Engineer	Beaumont.
Brown, T. H	1879	S		Sugar planter	Houston.
Brown, W. H	1880	C. E	C. E	Planter	Navasota.
Bruce, E. L	1894	C. E	B. C. E	Ass't cashier bank	Mineola.
Bryan, B. F	1897	A	B. S	Foreman dairy farm	Denton.
Buckman, C. A	1889	C. E	B. C. E	Engineer	Denison.
Buford, F. L	1892	C. E	B. C. E	Ass't Eng. G. B. & K. C. Ry.	Beaumont.
Buhler, C. M	1897	M. E	B. S	Aud. Office S. P. Ry	Victoria.
Buhler, C. W	1892	C. E	B. C. E	Chief Car Dept. S. A. & A. P. Ry.	San Antonio.
Burck, L. B	1889	C. E	B. C. E	Broker	Galveston.
Burford, J. M	1882	M		Physician	Independence.
Burckhardt, C. L	1886	M		Bank cashier	Karnes City.
Burgoon, C. E	1895	M. E	B. M. E	Ass't Prof. Mech'l Eng.	College Station.
Burleson, R. W	1895	M. E	B. M. E	Deputy district clerk..	San Saba.
Burney, J. W	1896	M. E	B. S	Planter	Kerrville.

NAME.	Year	Subject or Course.	Degree.	OCCUPATION.	Residence.
*Caldwell, J. C	1883	M			
Campbell, D	1879	S		Stockman	Sanderson.
Carson, A. B	1897	C. E	B. S	Teacher	Whitaker.
Carson, J. M	1886	A		Bookkeeper	Fort Worth.
Carson, J. W	1886	A		Planter	Pitts Bridge.
Carter, W. T., Jr	1898	A	B. S	Stockman, La. Exp.Sta	Calhoun, La.
Caruthers, F	1885	A		Cash'r U. S. land office	Oklahoma, O. T.
Caven, G. P	1897	A	B. S	Real Estate	Dallas.
Cavitt, W. H	1897	M. E	B. S	Clerk	Bryan.
Chambers, M. L	1879	G		Cashier	Fort Worth.
Clark, H	1895	A	B. S. A	Physician Ho'st'n Hosp	Houston.
Clayton, W. D	1897	A	M. S	Foreman Exp. Farm	New Orleans.
Cobb, S. A	1896	C. E	B. S	U.S. Geological survey	Denison.
Cochran, E. G	1879	F. Philos	E	Physician	Greenville.
Cohn, S. L	1897	C. E	B. S	Merchant	St. Louis, Mo.
Cook, E. A	1892	M. E	B. M.E		Cleburne.
Cottingham, I. A	1886	M		Div. Eng. S. P. Ry	Del Rio.
Cottingham, W. P	1892	C. E	B. C. F	Draughtsman S. P. Ry. Eng. Dep't.	Houston.
Cotton, H	1897	C. E	B. S	Insurance	Ennis.
Couch, E	1897	M. E	B. S	Surveyor	Forreston.
Coulter, H. T	1895	H	B. S. H	Physician	Bryan.
Coulter, W. J	1895	M. E	B. M. E	Merchant	Bryan.
Cox, D. W. S	1892	C. E	B. C. E	Oil mill clerk	Temple.
Cravens, J. R	1882	M		State Agt. and adjuster Am.Cent. Ins. Co	Dallas.
Crow, E	1898	H	B. S	Medical student	New Orleans.
Cunningham, A	1879	L. Gr. G. Math. C. P		Route Agt. D. F. W. Ry	Denver, Colo.
Cushing, D	1891	M. E	B. M. E	Pharmacist	Nashville, Tenn.
Dashiell, W. R	1891	C. E	B. C. E	Physician	San Antonio.
Davis, J. N	1885	M		Supt. Pub. Schools	Hico.
Dawson, N. A	1884	M		Lawyer	Austin.
Dazey, W. L	1894	C. E	B. C. E	Dentist	Hillsboro.
Dietert, R. H	1888	M. E	B. M. E	Supt. Repair Dept. H. & T. C. shops	Houston.
Donalson, C. B. Jr	1898	M. E	B. S	Planter	Kyle.
Downs, J. R	1879	L. G		Lawyer	Waco.
Downs, P. L	1879	L. Gr. G		Banker	Temple.
Drisdale, W. E	1889	H	B. S	Physician	Flatonia.
Dudley, F. E	1885	M			
Duggan, A. P	1895	C. E	B. C. E	Law student	Austin.
Edwards, J. F	1883	M		Merchant	Denton.
Eberspacher, G	1896	M. E	B. S	Machinist S. P. Ry. shops.	Houston.
Eldridge, H. M	1897	C. E	B. S	Clerk	Brenham.
Ellis, B. V	1892	A	B. S. A	Physician	Paris.
Ellis, Fort O	1894	C. E	B. C. E	N. La. Land Co	Winnsboro, La.
Farmer, A. G	1895	M. E	B. M. E	Stockman	Junction City.
Faust, W	1897	C. E	B. S	Ass't cashier bank	New Braunfels.
Fearhake, J. D	1889	C. E	B. C. E	Lawyer	Galveston.
Ferguson, A. M	1894	H	B. S. H		
Field, H. Y	1891	A	B. S. A	Bookkeeper	Dallas.
Finney, C. B	1896	C. E	B. S	Civil engineer	C. P. Diaz, Mex.
Fitzgerald, A. H	1895	A	B. S. A	Druggist	Gonzales.
Fitzhugh, E. E	1880	E. L. Math		Insurance	Waco.
Floyd, J. F., Jr	1892	M. E	B. M. E		Long Leaf, La.
Flynt, H. C	1890	A	B. S. A	Stockman	Waelder.
Fort, F. W	1879	L. Gr. G		Bank cashier	Waco.
Fordtran, F. L	1887	A		Physician	Flatonia.
Fowler, E. G. R	1894	C. E	B. C. E	Lawyer	Palestine.
Freeman, J. H	1887	M		Insurance agent	Austin.
Foutrel, G. F	1898	M. E	B. S	Machinist M. I. Ry	C. P. Diaz, Mex.
Fuller, T. A	1879	G		Lawyer	San Antonio.
Giesecke, F. E	1886	M	M. E. '92	Prof. Drawing	College Station.
Giesecke, G	1884	M		Prop. flour mills	San Antonio.
Giesecke, W. E	1892	M. E	B. M. E	Civil engineer	Torreon, Mex.
Gilbert, J	1894	A	B. S. A	Physician	Hornsby's Bend.
Gilmore, H. A	1896	M. E	B. S	Lineman El. Light Co	Victoria.
Glover, W. F. H	1898	A	B. S	Rice planter	Yemassee, S. C.
Goldberg, I. L	1896	H	B. S	Merchant	Jefferson.
*Graves, C. S	1882	M			
Gray, J. L	1884	M		Civil engineer	
Green, R. B	1884	M		District judge	San Antonio.
Greenwood, F. J	1898	C. E	B. S	Civil Engineer	Stoneham.
Gruene, E	1887	M		Teacher	New Braunfels.
Grupe, G	1892	M. E	B. M. E	Engineer	College Station.
Gurley, D. R., Jr	1892	C. E	B. C. E	Superintendent farm	Waco.
Hanschke, R., Jr	1890	M. E	B. M. E	Engineer	San Antonio.
*Hare, H. C	1887	M			
Hare, S. A	1882	M		Lawyer, County Att'y.	Sherman.

NAME.	Year	Subject or Course.	Degree.	OCCUPATION.	Residence.
Harrison, W. A	1898	H	B. S.	Bookkeeper S. W. Soda Fountain Co.	Dallas.
Hawkins, J. W	1893	A	B. S. A	Lawyer	Hallettsville.
Haden, J. H	1879	S		Merchant	Blooming Grove.
Henderson, H.	1891	A	B. S. A	Cotton buyer	Paris.
Hereford, J. B	1887	M		Special insurance ag't.	Dallas.
Hernstand, S. J	1890	C. E	B. C. E	Cotton buyer	Dallas.
Hildebrandt, A. M	1896	H	B. S. M. S., '98	Editor Texas Stockman and Farmer, Horticultural Dep't.	San Antonio.
Hoffman, F. C	1888	M. E	B. M. E	Jeweler	New Braunfels.
Homan, A. C	1898	M. E	B. S.	Machinist M. I. Ry	C. P. Diaz, Mex.
Holman, J. R	1895	C. E	B. C. E	Civil engineer	Comanche.
Hopkins, S. H	1890	A	B. S. A	Lawyer	Gonzales.
Hough, S	1885	M		Lawyer	Rock Springs.
Houston, F	1894	C. E	B. C. E	Foreman S. P. Ry	West Lake, La.
Howell, J. W	1891	A.	B. S. A	Merchant	Bryan.
Howell, R. W	1896	A	B. S	Merchant	Bryan.
Hudgins, F. D	1897	C. E	B. S.	Civil Engineer A. & C. Railwayy.	Goodland, Ark.
Hutchinson, E. W	1889	C. E	B. C. E	Merchant	Houston.
Hutchinson, O. D	1893	A	B. S. A	Merchant	Decatur.
Hutchinson, W. F	1897	C. E	B. S.	Clerk	Denton.
Hutson, H. L	1896	M. E	B. S.	Ass't foreman Worthington Hydraulic Works.	New York.
Hutson, W. F	1895	A	B. S. A		College Station.
*Jack, D. M	1879	L. Gr Philos. E.			
Jahn, F. C	1894	H	B. S. H	Horticulturist	Gonzales.
Japhet, G	1894	M. E	B. M. E	Merchant	Houston.
Jonas, E. C	1894	C. E	B. C. E	Railroad office S. A. & A. P. Ry.	Aransas Pass.
Jonas, H. F	1888	C. E	B. C. E	Chief draughtsman S. P. Ry., B. & B. Div.	Houston.
*Jones, W. T	1889	C. E	B. C. E		
Jordan, H. P	1895	C. E	B. C. E	Lawyer	Waco.
Josey, N. L	1888	A	B. S. A	Manager San Luis Potosi Electrical Co.	San Luis Potosi, Mex.]
Kell, E	1894	M. E	B. M. E	Electrical engineer	New Orleans, La.
Kennedy, O	1883	M		Lawyer	Groesbeck.
Kerr, E. W	1896	M. E	B. S	Ass't Prof. Mch'l Eng	College Station.
Kerr, J. G	1898	A	B. S	Planter	Vineland.
Knolle, A. P	1888	C. E		Physician	Ellinger.
Knolle, B. E	1884	M		Physician	Industry.
Knolle, E. R	1887	M		Physician	Wesley.
Knolle, O. J	1897	A	B. S	Medical student	Louisville, Ky.
Knolle, W. H	1888	C. E	B. C. E	Physician	New Orleans.
Kopke, L. J	1880	C. E	C. E	Chief Eng. G. B. & K. C. Ry.	Beaumont.
Kuhne, J. F	1889	M. E	B. M. E	Bank clerk	Austin.
Kyle, A. J	1897	A	B. S.	Stockman	Bovina.
Kyle, H. C	1896	A	B. S.	Foreman of farm	College Station.
Kyle, J. A	1890	A	B. S. A	Physician	Houston.
Kyle, T. M	1893	M. E	B. M. E	Stock farmer	Nursery.
Law, F. M	1895	A	B. S. A	Bank bookkeeper	Bryan.
Leggett, W. K	1889	C. E.	B. C. E	Special ag't Fireman's Fund Insurance Co.	Columbus, O.
Lewis, F	1894	C. E	B. C. E	Civil engineer	Forney.
Lewis, L. L	1893	A	B. S. A M. S., '94	Prof. Vet'nary Science, A. & M. College.	Stillwater, O. T.
Lipscomb, R. S	1882	M		Physician	Grapevine.
Littlejohn, R. G	1891	C. E	B. C. E	Insurance agent	Fort Worth.
Luckett, W. H	1891	A	B. S. A	Physician	New York.
*Luckett, W. M	1894	M. E	B. M. E		
Mabry, R	1889	C. E	B. C. E	Traveling salesman	New York.
Mackenson, B. C	1884	M		Teacher	San Antonio.
Mackenson, L	1885	M		Teacher	San Antonio.
Martin, H. B	1895	M. E	B. M. E	Prof. Military Science and Comd't.	College Station.
Martin, W. C	1898	H	B. S	Ass't Prof. Chemistry	College Station.
Massenberg, W. G	1894	C. E	B. C. E	Civil engineer	Texarkana.
Mead, J	1897	C. E	B. S	General inspector masonry G., C. & S.F.Ry.	Temple.
Merritt, W. B	1889	A	B. S. A		McKinney.
Merriwether, W. T	1891	C. E	B. C. E		San Antonio.
Meyers, W. G	1894	M. E	B. M. E	Civil engineer	Meridian, Miss.
Middlebrook, E. S	1889	C. E	B. C. E	Lawyer	Columbus.
Middlebrook, R. M	1891	M. E	B. M. E	Lawyer	Columbus.
Miley, J. H	1896	C. E	B. S.	Bookkeeper	Bastrop.
Miller, C. S	1880	E. L		Real estate agent	Ballinger.

NAME.	Year	Subject or Course.	Degree.	OCCUPATION.	Residence.
Miller, H. J	1883	M		Merchant	Bellville.
Mitchell, A.	1894	C. E.	B. C. E.	Princ. public school	Rosenberg.
Mitchell, W. H	1893	C. E.	B. C. E.	Druggist	Holland.
Montgomery, F. L.	1889	A.	B. S. A	Lawyer	Sherman.
Moore, R.	1892	A	B. S. A		Linden.
Moore, T. E.	1892	A.	B. S. A	Physician	San Antonio.
Moore, W. M.	1895	C. E	B. C. E	Civil engineer	McKinney.
Morrill, C. R	1891	C. E.	B. C. E.	Roadmaster, S. P. Ry	Lafayette, La.
*Mosely, W. E	1883	M			
Moursund, A. F.	1895	C. E.	B. C. E.	Ass't Div. Eng. S. P. Ry	Algiers, La.
Moursund, E. M.	1897	C. E.	B S.		Fredericksburg.
Mouser, E. B.	1895	A.	B. S. A.	Physician	Cain.
Mullins, E. Y.	1879	L. G		Minister	Newton Center. [Mass.
McCormick, Geo., Jr.	1891	M. E.	B. M. E.	Chief draughtsman, Motive dept. S. P. Ry.	Houston.
McColloch, C. C.	1886	M		Surgeon U. S. Army	
McDonald, H. F.	1895	M. E.	B, M. E.		McKinney.
McMillan, M.	1895	M	B. M. E	Asst. Surgeon U. S. A.	Puerto Principe, [Cuba.
McNair, H. J.	1887	M		Civil engineer	Houston.
McNeill. J. C.	1896	C. E.	B. S.	Surveyor	Brazoria.
McQueen, T. B.	1884	M		Bookkeeper	Marlin.
Neathery, D. E.	1892	A	B. S. A	Merchant	Farmersville.
Ness, H.	1889	H.	B. S.	Ass't. Prof. Horticulture and Botany.	College Station.
Newton, G.	1898	A.	B. S.	Bookkeeper	Milano.
Nichols, J. F.	1889	H.	B. S.	Lawyer	Greenville.
Nichols, J. R.	1889	A.	B. S. A.	Ass't surg. ins. asylum	Terrell.
Nichols, W. L	1891	C. E.	B. C. E.	Electrician, Standard Light and Power Co.	Dallas.
O'Bar, J. H	1893	A.	B. S. A.	Insurance agent	LaGrange.
Oglesby, G. B	1894	C. E.	B. C. E.	Teacher	Cedar Mills.
Ortiz, J. A.	1892	C E.	B. C. E.	Merchant	Laredo.
Overshiner, E. M.	1897	C. E.	B. S.	Law student U. of T	Austin.
Park, C. M.	1896	C. E.	B. S.	Sec'y and bus. manager Southern Mercury Pub. Co.	Dallas.
Parsons, B. C.	1893	H.	B. S. H.	Prop. livery stable	Kerrville.
Patrick, A. T.	1883	M		Lawyer	New York.
Pearson, H. A.	1893	C E.	B. C. E.	Planter	Troy.
Pennington, R. E.	1884	A.		Lawyer	Brenham.
Perlitz, W. E.	1893	C. E.	B. C. E.	Merchant	Schulenburg.
Pescay, C. H.	1885	M.		Spec. Ins. agent	Houston.
Peters, F.	1894	M. E.	B. M. E.	Draughtsman S. P. Ry	Houston.
Pfeuffer, F. L	1885	M.			New Braunfels.
Pfeuffer, W. O. R	1888	A.	B. S. A.	Physician	New Braunfels.
Pfeuffer, U. S.	1891	C. E..	B. C. E.	Lumber merchant	New Braunfels.
Philpott, W. B.	1884	M.	M. S. '95.	Assoc. Prof. Eng. and History	College Station.
Pittuck, B. C.	1894	A.	B. S. A.	Ag'c'l'st Tex. Exp. Sta	College Station.
Polk, W. A.	1895	C. E.,	B. C. E.	Civ. Eng. Dept. G., C. & S. F. Ry.	Temple.
Radford, J. S.	1890	H.	B. S. A.	Lawyer	Houston.
Ragsdale, J. W.	1890	A.	B. S. A.	Lawyer	Halletsville.
Ratchford, W. P.	1892	M. E.	B. M. E.	County surveyor	Fort Stockton.
Rawlins, H. E.	1898	M. E.	B. S.	Chief Civil'n Cl'k Com. Dept. U. S. A.	Havana.
Reichardt, F. A.	1879	G.		Merchant	Houston.
Rennert, F.	1888	A.	B. S. A.	Bookkeeper	San Antonio.
Rhodes, S. E.	1896	M. E.	B. S.	Bookkeeper	Bryan.
Rice, D.	1882	M.		Public Weigher	Houston.
Rike, H. N.	1893	C. E.	B. C. E.	Surveyor	Haskell.
Roach, G. W.	1884	M.		Teacher	El Paso.
Robson, C. G.	1898	H.	B. S.	Law student	LaGrange.
Roderiquez, D.	1896	C. E.	B. S.	Student	Ithaca, N. Y.
Rogan, Chas.	1879	G. E. C. P.		Land Commissioner	Austin.
Rogers, B. F.	1889	C. E.	B. C. E.	Merchant	Jefferson.
Rogers, G. A.	1887	M.		Merchant	Longview.
Rogers, R. A.	1878	L. G. Gr. E. Phil. '79		Cotton factor and Com. merchant.	Galveston.
Rollins, C. W.	1893	C. E.	B. C. E.	County surveyor	Richmond.
Rollins, H. M.	1897	M. E.	B. S.	Engineer ice & light pl	Hempstead.
Rose, W. F.	1894	M. E.	B. M. E.	Draughtsman S. A. & A. P. Ry.	San Antonio.
Rosenthal, H. H.	1896	C. E.	B. S.	Clerk	Jefferson.
Ross, F. R.	1894	A.	B. S. A.	Ass't Surgeon Insane Asylum	Austin.
Ross, J. G.	1894	C. E.	B. C. E.	Real Estate agent	Cold Springs.
Rountree, T. D.	1898	C. E.	B. S.	Law student, U. of Va	Charlottsville, Va
Rowell, T. D.	1885	A.		Lawyer, county judge	Jefferson.
Rudasill, W. S.	1890	C. E.	B. C. E.	Stockman	Sherman.

NAME.	Year	Subject or Course.	Degree.	OCCUPATION.	Residence.
Sanders, W. O	1896	H	B. S	Merchant	Bryan.
Sauvignet, E. H	1892	A	B. S. A	Physician Santa Rosa Hospital.	San Antonio.
Sawyer, R	1882	M		Lumber merchant	Clarendon.
Scherer, C. L	1896	C. E	B. S	Civ. Eng. Dept. G., C. & S. F. Ry.	Galveston.
Scherer, W. A	1898	H	B. S	Stockman	Anahuac.
Schmidt, C. L	1890	M. E	B. M. E	M'chinist Mex. N't'l Ry	Laredo.
Schmidt, D. T. C	1894	C. E	B. C. E	Foreman M. L. & T. Ry	Louisa, La.
Schumacher, H. C	1892	C. E	B. C. E	Banker	LaGrange.
Sewell, M. S	1894	C. E	B. C. E	Clerk	McGregor.
Shires, F. N	1897	M. E	B. S	General inspector masonry G. C. & S. F. Ry.	Galveston.
Shires, G. M	1897	M. E	B. S	Eng. C. E. L. & P. Co	Houston.
Shirley, A. L	1884	A		R. R. Agt. and M'ch'nt	Anna.
*Shirley, M. W	1889	M. E	B. M. E		
Shirley, W. M	1889	C. E	B. C. E	County surveyor	McKinney.
*Shirley, Z. M	1888	M. E	B. M. E		
Short, J. L	1893	A	B. S. A	Physician	Houston.
Sleeper, W. M	1879	L. Gr. G. M		Lawyer	Waco.
Smith, A. U	1895	M. E	B. M. E	Foreman Bag'g Fact'y	Galveston.
Smith, E. J	1888	A	B. S. A	Lawyer	Denison.
Smith, T. L	1898	C. E	B. S	Civ. Eng. Dept. G. C. & S. F. Ry.	Galveston.
Smither, R	1894	M. E	B. M. E	Clerk	Huntsville.
Smythe, H. G	1879	G		Physician	Bryan.
Sneed, G. L	1898	A	B. S	Clerk	McKinney.
*Spann, E. W	1885	M			
Speer, R. H	1894	C. E	B. C. E	Stockman	Quanah.
Sternenberg, E. H	1897	C. E	B. S	Civ. Eng. H. & T. C. Ry	Ennis.
Stewart, W. W	1888	M. E	B. M. E	Miller	Stewart's Mill.
Swain, M. S	1888	H	B. S	Captain 2d U. S. V. I	Santiago, Cuba.
Talbot, A	1882	M		Planter	Calvert.
Tilson, M. D	1886	M		Manufact'er and merchant	Texarkana.
Tilson, P. S	1888	A	B. S. A M. S., '94	Assoc. Prof. Chemistry	College Station.
Todd, A. M	1894	C. E	B. C. E	U. S. levee inspector	Greenville, Miss.
Todd, C. C	1897	H	B. S	Lieutenant U. S. A	Manilla, P. I.
Tracy, H. H	1898	C. E	B. S	Printer, Williams-Tracy Printing Co.	Dallas.
Trenckmann, W. A	1878	G F. S., Phil., E., C., P., '79		Editor	Bellville.
*Tuller, W. L	1883	M			
Ueckert, H. H	1897	C. E	B. S	Draughtsman S. P. Ry	Houston.
VanZandt, K. M	1879	G		Civil Engineer	City of Mexico.
VanZandt, R. L	1890	C. E	B. C. E	Bank bookkeeper	Fort Worth.
Vinther, F	1897	M. E	B. S	Machinist	Pine Bluff, Ark.
Wangemann, A. E	1890	A	B. S. A	Wholesale grocer	Brenham.
Watkins, R. C	1895	C. E	B. C. E	Local supt. S. P. R'y	Thibideaux, La.
Watkins, W. A	1892	C. E	B. C. E	Teacher	Bryan.
Watson, D. H	1882	M		Horticulturist	Brenham.
Watson, W. D	1893	A	B. S. A	Dairyman	Houston.
Weidel, J	1893	C. E	B. C. E		San Antonio.
Wellhausen, C. B	1891	M. E	B. M	Bank cashier	Shiner.
Wells, D. D	1895	A	B. S. A	Ass't surgeon U. S. A	Washington, D.C.
*Wesson, J. M	1883	M			
West, T. B	1887	M		Agent S. P. Ry	Glidden.
Whelan, J. J	1891	M. E	B. M. E	Machinist, H. & T. C. Ryailway.	Houston.
Wheat, N	1897	C. E	B. S	Asst. draughtsman G., C. & S. F. Ry.	Galveston.
Whitaker, W	1885	M		Lumber manufacturer	Texarkana.
White, G. R	1895	C. E	B. C. E	Stockman	Brady.
Whitener, H. L	1891	A	B. S. A	Physician	St. Louis, Mo.
Whitlock, E. H	1886	M		Expert mch'l engineer, National Carbon Co.	Cleveland, O.
Wight, A. T	1995	C. E	B. C. E	Merchant	Roxton.
Williams, L. D	1897	C. E	B. S	Clerk Freight Dept. H. & T. C. Ry.	Austin.
Wilson, W	1893	C. E	B. C. E	Lawyer	Port Lavaca.
Wipprecht, W	1884	A	B. S. A., '85	Manager Compress Co	Bryan.
Wisdom, F. L	1896	C. E	B. S	Shipping Clerk	Aline, Ark.
Wood, W. M	1888	C. E	B. C. E	Mgr. Williams Type-Writer Co.	Washington, D.C
Wright, E	1892	C. E	B. C. E	Lawyer.	Paris.
Wright, H. L	1886	M		Mgr. Palestine Water and Power Co.	Palestine.
Woodward, W. F	1886	M		Stockman	Antelope.
Wurzbach, W. A	1888	C. E	B. C. E	Lawyer	San Antonio.



Battalion Review.

The following is a list of those graduates who entered the United States Volunteer Army for the war with Spain, with the rank of each:

MAJOR.—R. A. Rogers, '78.

CAPTAINS.—Geo. McCormick, Jr., '91; E. G. R. Fowler, '94; Joseph F. Nichols, '89; J. R. Holman, '95; W. F. Rose, '94; W. D. Anderson, '90; M. S. Swain, '88.

FIRST LIEUTENANTS.—E. G. Abbott, '94; W. F. McDonald, '95; W. F. Hutson, '95; W. E. Perlitz, '93; E. A. Cook, '92.

REGIMENTAL SERGEANT-MAJOR.—C. G. Robson, '98.

SERGEANTS.—W. P. Cottingham, '92; A. W. Bloor, '95; R. M. Middlebrook, '91; Hal Henderson, '91; H. M. Rollins, '97.

CORPORALS.—Dan Cushing, '91; E. M. Moursund, '97; H. L. Hutson, '96.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS.

This College owes its origin to

An Act Donating Public Lands to the Several States and Territories which may Provide Colleges for the Benefit of Agriculture and the Mechanic Arts.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there be granted to the several States, for the purpose hereinafter mentioned, an amount of public land, to be apportioned to each State, a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty; provided, that no mineral land shall be selected or purchased under the provisions of this act.

Sec. 2. And be it further enacted, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections not less than one-quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said States shall be entitled shall be selected from such lands within the limits of such State; and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip, to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said States and the proceeds applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever; provided, that in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents or less per acre; and, provided further, that no more than one million acres shall be located by such assignees in any one of the States; and, provided further, that no such location shall be made before one year from the passage of this act.

Sec. 3. And be it further enacted, That all the expenses of management, superintendence and taxes from date of selection of said lands previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

Sec. 4. And be it further enacted, That all moneys derived from the sale of the lands aforesaid, by the States to which the lands are apportioned, and from the sale of land scrip hereinbefore provided for, shall be invested in stocks of the

United States, or of the States, or some other safe stocks, yielding not less than 5 per centum upon the par value of said stocks, and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section 5 of this act), and the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

Sec. 5. And be it further enacted, That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First. If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund may remain undiminished, and the annual increase shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum not exceeding 10 per centum upon the amount received by any State under the provisions of this act may be expended for the purchase of lands for sites or experimental farms, wherever authorized by the respective Legislatures of said States.

Second. No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings.

Third. Any State which may take and claim the benefit of the provisions of this act shall provide, within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall cease, and said State shall be bound to pay to the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth. An Annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters, including State industrial and economical statistics, as may be supposed useful, one copy of which shall be transmitted by mail free by each to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the State at the maximum price, and the number of acres proportionately diminished.

Sixth. No State, while in a condition of rebellion or insurrection against the government of the United States shall be entitled to the benefits of this act.

Seventh. No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its Legislature within two years from the date of its approval by the President.

Sec. 6. And be it further enacted, That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

Sec. 7. And be it further enacted, That land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws; provided, their minimum compensation shall not be thereby increased.

Sec. 8. And be it further enacted, That the governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved July 2, 1862.

And to the following amendment:

An Act to amend the fifth section of an act entitled "An act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and the Mechanic Arts," approved July 2, eighteen hundred and sixty-two, so as to extend the time within which the provisions of said act shall be accepted and such colleges established.

1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the time in which the several States may comply with the provisions of the Act of July 2, eighteen hundred and sixty-two, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," is hereby extended so that the acceptance of the benefits of the said act may be expressed within three years from the passage of this act, and the colleges required by the said act may be provided within five years from the date of filing of such acceptance with the Commissioner of the General Land Office; provided, that when any Territory shall become a State and be admitted into the Union, such new State shall be entitled to the benefits of said Act of July 2, eighteen hundred and sixty-two, by expressing acceptance therein required within three years from the date of its admission into the Union, and providing the college or colleges within five years of such acceptance, as prescribed in this act; provided further, that any State that has heretofore expressed its acceptance of the act herein referred to shall have the period of five years within which to provide at least one college, as described in the fourth section of this act, after the time for providing said college, according to the Act of July 2, eighteen hundred and sixty-two, shall have expired.

Approved July 23, 1865.

By joint resolution, approved November 1, 1871, the Legislature of Texas formally accepted the provisions of the congressional acts, and the State received, from the general government, scrip for 180,000 acres of public land. This was sold for $174,000, which sum was invested in Texas 7 per cent. gold frontier defense bonds. At the time of the opening of the College there was an addition to the fund from accrued interest of $35,000, which was invested in 6 per cent. State bonds. The income from these sources is $14,280.

The Legislature fulfilled its obligations by passing "An Act to provide for the establishment of an Agricultural and Mechanical College of Texas," approved April 17, 1871, and by making liberal successive appropriations (aggregating $187,000) for the buildings and equipments necessary for putting the institution in operation. And the county of Brazos secured its location within its limits by donating to the State the present College farm, a tract of 2416 acres, five miles south of the town of Bryan.

Finally, the Constitution of 1876, article VII, provided: "Section 3. The Agricultural and Mechanical College of Texas, established by the act of the Legislature, passed April 17, 1871, located in the county of Brazos, is hereby made and constituted a branch of the University of Texas, for instruction in agriculture, the mechanic arts, and the natural sciences connected therewith."

The College was formally opened for the reception of students October 4, 1876.

The Constitution of Texas provides that taxes may be raised for the maintenance and support of the College.

The following act of the Legislature of Texas is now the law governing the College:

An Act regulating the government of the Agricultural and Mechanical College of Texas, as approved March 9, 1875, and amended March 30, 1881.

I. The Board of Directors of said College shall consist of five members.

II. The Directors provided for in the preceding article shall be appointed by the Governor, to be selected from the different portions of the State, and shall hold office for six years or during good behavior, and until their successors are qualified.

III. The Governor shall be authorized to call said Board together after their appointment, and said Board shall at their first meeting elect a president of the Board, who shall thereafter be authorized to call said Board together for the transaction of business whenever he deems it expedient, and a majority of said Board shall constitute a quorum for the transaction of business.

IV. Each of said Directors shall receive their actual expenses incurred in attending the meetings of the Board, to be paid out of the interest of the University fund, on accounts certified by them respectively to be correct, and approved by the Governor.

V. The Secretary of State shall forward a certificate to each Director within ten days after his appointment, notifying him of the fact of such appointment; and should any Director so appointed and notified fail for ten days to give notice to the Governor of his acceptance, his appointment shall be deemed void and his place filled as in case of vacancy.

VI. The Board of Directors shall appoint the President and Professors of the College, and such other officers as they may think proper to put the College into successful operation, and shall make such by-laws, rules and regulations for its government as they deem meet and proper for that purpose, and shall regulate the course of study, rates of tuition, manner of performing labor, and the kind of labor to be performed by the students, together with the course of discipline necessary to enforce the faithful discharge of all the duties of all officers, professors and students, and shall have same printed and circulated for the benefit of the people of the State and officers and students of the College.

VII. The Board of Directors shall elect a Secretary of the Board, whose duty it shall be to keep in a well-bound book all the proceedings had by this Board; and he shall be allowed by said Board such compensation as they may allow; provided, that the same does not exceed five hundred dollars per annum.

VIII. The interest on the amount of one hundred and seventy-four thousand dollars in 7 per cent. gold interest-bearing frontier bonds of Texas, now in the State treasury to the credit of the College, being set apart for that purpose, shall be drawn by the Board of Directors on vouchers audited by the Board, or approved by the Governor and attested by the Secretary, and on filing such vouchers the Comptroller shall draw his warrant on the State treasury for the same, from time to time as they may be needed, to pay the directors, officers and professors of the College.

The following joint resolution was passed by the Sixteenth Legislature:

Joint resolution authorizing the State Librarian to turn over to the Agricultural and Mechanical College of Texas specimens of minerals and other geological specimens in the geological department of said library in certain cases, and copies of all public documents of the State, published for distribution, and all apparatus belonging to the old geological survey.

Section 1. *Be it resolved by the Legislature of the State of Texas:* That the State Librarian be and he is hereby authorized and required to turn over to the Agricultural and Mechanical College of Texas the duplicate specimens in the hands of the agent of the International Railroad Company of all minerals and other geological specimens in the geological department in said library, and copies of all public documents of the State published for distribution, and apparatus belonging to the old geological survey, for the use and benefit of said College.

Sec. 2. That said librarian be required to take an inventory of all specimens thus turned over to said College by him, and file the same in his office.

Sec. 3. The near approach of the close of this session of the Legislature, and the pressing need of geological specimens at said College for the better instruction of its pupils, creates an imperative public necessity for the suspension of the constitutional rule requiring this resolution to be read on three several days; therefore, be it further resolved, that the constitutional rule be suspended and this resolution take effect and be in force from and after its passage.

Approved July 9, A. D. 1879.

An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress, approved July second, eighteen hundred and sixty-two.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated out of any money in the treasury not otherwise appropriated, arising from the sale of public lands, to be paid as hereinafter provided, to each State and Territory, for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts, now established, or which may be hereafter established, in accordance with an Act of Congress, approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years, by an additional sum of one thousand dollars over the preceding year; and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematics, physical, natural, and economic science, with special reference to their applications in the industries of life and to the facilities for such instruction; provided, that no money shall be paid out under this act to any State or Territory for the support or maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act, if the funds received in such State or Territory be equitably divided, as hereinafter set forth; provided, that in any State in which there has been one college established in pursuance of the Act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the act to which this act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act, between one college for white students, and one institution for colored students, established as aforesaid, which shall be divided into two parts, and paid accordingly; and thereupon such institution for colored students shall be entitled to the benefits of this act, and subject to its provisions, as much as it would have been if it had been included under the Act of eighteen hundred and sixty-two; and the fulfillment of the foregoing provisions shall be taken as a compliance with the provisions in reference to separate colleges for white and colored students.

Sec. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the treasury of the United States, to the State or Territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges, or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the first day of September of each year, a detailed statement of the amount so received, and of its disbursement. The grants of money authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants; provided, that payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of Legislature meeting next after the passage of this act, shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

Sec. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support and maintenance of colleges, or of institutions for colored students, as provided in this act, shall, by any action or contingency, be diminished or lost, or be misplaced, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or

Territory; and no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings. An annual report by the president of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to such colleges, with their cost and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail, free, to all other colleges further endowed under this act.

Sec. 4. That on or before the first day of July in each year after the passage of this act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory, whether it is entitled to receive its share of the annual appropriation for colleges, or for institutions for colored students, under this act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the treasury; and the Secretary of the Interior is hereby charged with the proper administration of this law.

Sec. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

Sec. 6. Congress may at any time amend, suspend or repeal any or all of the provisions of this act.

Approved August 30, 1890.

OFFENSES RELATING TO PUBLIC BUILDINGS.

Chapter 5 (S. B. No. 41). An Act to amend article 417, chapter 4, title 13, of the Penal Code of the State of Texas.

Whereas, for the purpose of preserving the new State capitol it becomes necessary to better define the offenses set out in the aforesaid act; therefore,

Section 1. *Be it enacted by the Legislature of the State of Texas,* That article 417, chapter 4, title 13, of the Penal Code of the State of Texas, which took effect July 24th, A. D. 1879, be amended so as to read as follows:

Sec. 2. Article 417. If any person shall wilfully injure or deface any public building or the furniture therein in this State, he shall be fined not less than five nor more than five hundred dollars. The word deface in this act shall be held to apply to writing, carving, or scratching on the walls or plastering or furniture of said building, or staining the same with paint or any article which will produce a discoloration of the same.

Sec. 3. Whereas, the preservation of the State capitol building, together with other public buildings, creates an imperative public necessity, and an emergency exists requiring the constitutional rule requiring bills to be read on three several days in each house to be suspended, and it is so suspended, and that this act take effect and be in force from and after its passage, and it is so enacted.

[Note.—The foregoing act originated in the Senate, and passed the same by a vote of 27 yeas, no nays; and passed the House by a vote of 76 yeas, 5 nays.]

Approved May 14, 1888.

TEXAS AGRICULTURAL EXPERIMENT STATIONS.

ORGANIZATION.

In accordance with the Act of Congress, the Board of Directors of the Agricultural and Mechanical College of Texas, at a meeting held January 25, 1888, established the Experiment Station as a department of the College. Provision was made for assigning to the Station department such part of the College farm, buildings and other equipment of the College as would be found necessary to prosecute the work, in addition to the outfit supplied from the funds of the Station.

The Director of the Station will have general supervision of all experimental work, correspondence, and publication of bulletins and reports.

The professors of Agriculture, Chemistry, Horticulture and Veterinary Science will have charge of Station work in their several departments.

LOCATION AND SUPPORT.

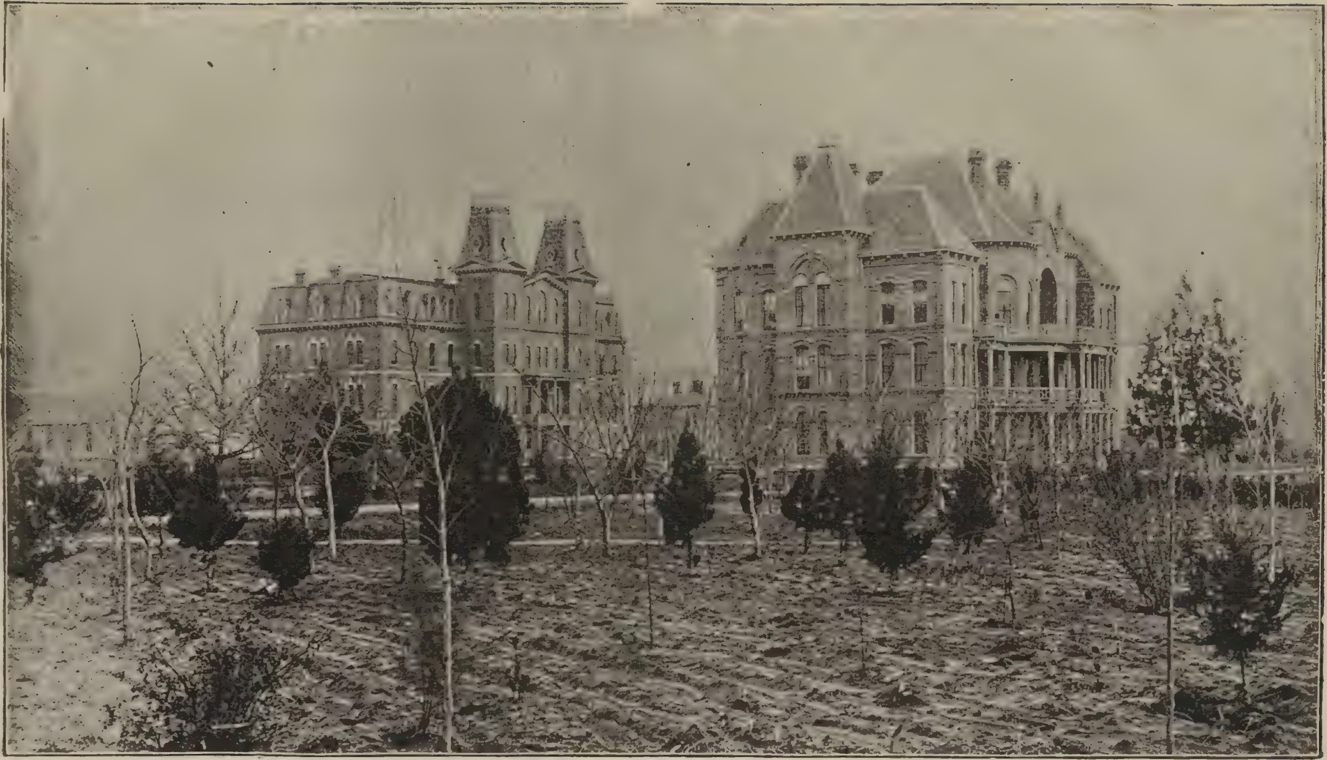
The Main Station, located in 1888 on the grounds of the Agricultural and Mechanical College, is supported entirely by appropriations from the Federal government.

A permanent sub-station, largely devoted to horticulture and fruit raising, was established in 1895 in Bee county for the purpose of testing new fruits and vegetables, as to their adaptability and plant food requirements in that portion of the State. This station is some two hundred miles south of the main station. This station is supported by State appropriations made biennially for this particular purpose.

OBJECTS.

The objects of the Experiment Station and of the sub-station are clearly set forth in section two (2) of the act of Congress to which they owe their establishment, a copy of which law is found on pages 102-104 of this Catalogue.

The Governing Board of the Station desire to make this work of as much value to the agricultural and horticultural interests of the State as may be possible. The work will be conducted at all times with special reference to giving information that may be of some practical use to the farmer. To enable them to carry out this policy, all associations having



Main Building and Ross Hall. (Winter View.)

the advancement of agriculture in view—the Grange, Alliance, associations of stock breeders, or fruit growers, or other organizations—will be invited from time to time to appoint delegates to meet with the board of directors and officers of the Station, and consult and advise with them in regard to the work of the Station. Suggestions will be gladly received at all times from any one who is interested in advancing the agricultural interests of the State.

ADVANTAGE TO COLLEGE.

Financially, the Station will not be of direct benefit to the College. To compensate the College, however, for the use of property assigned to the work of the Station, such work will add largely to the ability of the College to impart more thorough instruction in scientific and practical agriculture, horticulture, etc. College students will be employed in the work of the Station to as great an extent as may be found practicable, and the plant of the Station and experimental work in progress will increase the means of illustration of the College and be of special advantage to the students in providing practice and training in Agricultural and Horticultural work under skilled instructors. The Station will not add to the expense of the College in any way, as such time as may be given by professors or other employés in experimental work will be paid for from the Station fund, and the value of the time lost to the College deducted from the salary that would be paid by the College if the entire time was given to College work; and in order not to impair the efficiency of instruction the board has provided for additional instructors to relieve the professors of a portion of their class work.

An act to establish Agricultural Experiment Stations in connection with the colleges established in the several States under the provisions of an act approved July 2, 1862, and of the acts supplementary thereto.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled,* That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges, or agricultural departments of colleges, in each State or Territory, established, or which may be hereafter established in accordance with the provisions of an act approved July 2, 1862, entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements to said act, a department to be known and designated as an "Agricultural Experiment Station;" provided, that in any State or Territory in which two such colleges have been or may be so established, the appropriations hereinafter made to such State or Territory shall be equally divided between such colleges, unless the Legislature of said State or Territory shall otherwise direct.

Sec. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analyses of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and foliage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic question involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories.

Sec. 3. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far practicable, for the tabulation of results of investigation or experiments; to indicate from time to time such lines of inquiry as to him shall seem most important, and in general to furnish such advice and assistance as will best promote the purposes of this act. It shall be the duty of each of said stations, annually, on or before the first day of February, to make to the Governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of the said stations, to the said Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

Sec. 4. The bulletins or reports of progress shall be published at said stations at least once in three months; one copy of each shall be sent to each newspaper in the States and Territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge of postage, under such regulations as the Postmaster General may from time to time prescribe.

Sec. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments and printing and distributing the results as hereinbefore prescribed, the sum of $15,000 is hereby appropriated to each State, to be specially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of section 2 of this act, out of any money in the treasury proceeding from the sale of public lands, to be paid in equal quarterly payments on the first day of January, April, July, and October of each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, 1887; provided, however, that out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five (5) per centum of such annual appropriations may be so expended.

Sec. 6. That whenever it shall appear to the Secretary of the Treasury, from the annual statement of receipts and expenditures of any of said stations, that a portion of the preceding annual appropriation remains unexpended, such amount shall be deducted from the next succeeding annual appropriation to such station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

Sec. 7. That nothing in this act shall be so construed as to impair or modify the legal relation existing between any of the said colleges and the governments of the States and Territories in which they are respectively located.

Sec. 8. That in States having colleges entitled under this section to the benefits of this act, and having also Agricultural Experiment Stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiments at stations so established by said States; and in case any State shall have established, under the provisions of said act of July 2, aforesaid, an agricultural department or experimental station in connection with any university, college or institution not distinctively an agricultural college or school, and such State shall have established, or shall hereafter estabish, a separate agricultural school which shall have connected therewith an experimental farm or station, the Legislature of such State may apply, in whole or in part, the appropriation by this act made to such separate agricultural college or school, and no Legislature shall by contract, express or implied, disable itself from so doing.

Sec. 9. That the grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants; provided, that payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its Legislature meeting next after the passage of this act shall be made upon the assent of the Governor thereof, duly certified to the Secretary of the Treasury.

Sec. 10. Nothing in this act shall be held or construed as binding the United States to continue any payments from the treasury to any or all of the States or institutions mentioned in this act, but Congress may, at any time, amend, suspend or repeal any or all of the provisions of this act.

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